Trade and Industries

of the

Far Eastern Republic

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INTRODUCTION

Up to the present time there still exists in the mind of the average foreigner the unfounded idea of Siberia and the Russian Far East as being buried under eternal snow, and populated mostly by half civilized wandering tribes or ex-Russian convicts. To his imagination Siberia is the last place safe for travelling let alone the risking of an investment of considerable capital for the development of industries there.

The old Czarist Government which regarded Siberia as a safe and spacious asylum for political offenders, and which was never interested in the proper development of the vast natural resources of the country, has done nothing to enlighten the foreign nations regarding the splendid healthful climate of the country, with its untouched stretches of fir, pine, and birch forests, its numerous rivers and streams and mineral springs, its green meadows catching the traveler's eye for thousands of miles, and last, but not least, its untold wealth buried in the ground. The great opportunities in agriculture, cattle raising, mining, and other industries are known only to a few foreign newspaper men and commercial representatives and those who have visited the country.

The Far Eastern Republic, the present rightful sovereign of the Russian Far East, is sincerely desirous of affording all possible facilities for the application of foreign capital in the development of the country's wealth. It therefore intends to give its utmost attention to the problem of supplying the business world with available data of the mineral, forest, fishing and other resources of the Republic.

THE FOUNDATION OF THE FAR EASTERN REPUBLIC.

After the defeat of the Kolchak army in western Siberia in the winter of 1919-20, the rule of the Omsk Government was overthrown in many cities of the Far East and revolutionary Governments established instead.

Being at the time absolutely isolated from Soviet Russia, their territory occupied by foreign expeditionary troops, confronted by the constant danger of counter-revolutionary plots which were aided by foreign aggressors, the people of the Russian Far East which has always been removed from the centre by great distances, naturally had to depend upon themselves for protection; hence the general movement towards the organization of an independent government. Thus appeared the Vladivostok Zemstvo Government, and almost simultaneously the Amur and Verkhneudinsk Governments. All these Governments had one aim—the unification of the Russian Far East into an independent democratic state which could protect its people against all emergencies. On the 6th of April, 1920, the declaration of independence took place in Verkhneudinsk, and on the 14th of May, the Far Eastern Republic was recognized by Soviet Russia.

The process of unification of the Far Eastern provinces went further on in spite of the innumerable difficulties created by the interventionist troops (Japanese).

In September a preliminary conference of representatives of all Far Eastern Governments was convened in Verkhneudinsk, and after the expulsion of the counterrevolutionary Ataman Semenoff from Chita, which was the result of the evacuation of that territory by the Japanese troops, a final conference took place in Chita, where the unification of all the provinces and governments was completed. On the 9th of November the Chita conference confirmed the declaration of independence, promulgated laws for the calling of a Constituent

Assembly, and elected a Provisional Central Government. During December and January of 1921, the elections of the Assembly, which were conducted according to universal suffrage, took place. The Constituent Assembly was composed of over 400 members, mostly non-partisan peasants. The Assembly went into session on the 12th of February, and on the 27th of April the final draft of the Constitution was adopted, and a new Government was elected. The efforts of this new and regularly elected Government were primarily directed toward the election of new local authorities for the whole Far Eastern Republic. Elections soon took place, and district, country, and provincial assemblies and administrative authorities assumed control over the various parts of the Republic. This important task accomplished, the Government of the Far Eastern Republic directed its energies toward the establishment of conditions which would ensure prosperity to trade and industry. Much has already been accomplished in this respect, but still more may be expected with the complete liberation of those parts of the territory of the Far Eastern Republic which are occupied by the Japanese.

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CHAPTER I.

GEOGRAPHICAL POSITION AND ADMINISTRATIVE DIVISION.

The Far Eastern Republic is situated between the 101°40′ and 141°40′ East Longitude, and 57° and 42° North Latitude. The position of the respective provinces relative to Soviet Russia is as follows: The Zabaikal region (Zabaikal and Pribaikal Provinces), between 49°41′ and 57° North Latitude; the Amur Province between 47° and 56°; and the Maritime Province between 42° and 530 North Latitude.

The boundaries of the Republic are the River Selenga and Lake Baikal on the west, the Yakutsk Province (belonging to Soviet Siberia), and the Madjelinda Cape on the Sea of Okhotsk on the north; the Sea of Okhotsk, the Sea of Japan on the east; and Manchuria and Mongolia on the south.

The Far Eastern Republic is divided into five administrative centers (provinces): Pribaikal, Zabaikal, Amur, Priamur and Maritime. The administrative center of the Pribaikal Province is the city of Verkhneudinsk on the Trans-Siberian Railroad of Zabaikal—Chita, on the same railroad, which is also the capital of the Far Eastern Republic; of Amur — Blagoveshchensk, on the Amur River; of Priamur—Khabarovsk, also on the Amur River; of Maritime—Vladivostok, the principal commercial port of the Republic.

CHAPTER II.
AREA.

The total area of the Republic equals 1,690,568 square kilometers, divided among the respective provinces as follows:

Province	Area in Square Kilometers
Pribaikal	165,462
Zabaikal	396,004
Amur	400,917
Priamur (including Russian Saghalien) and Maritime	728,185

Thus, the area occupied by the Far Eastern Republic is one-seventh of that of the whole of Siberia, and about one-thirteenth of the whole of pre-revolutionary Russia. The territory of France, Spain and Germany combined is less than the area now occupied by the Far Eastern Republic.

CHAPTER III.

CLIMATE.

The climate of the Far Eastern Republic varies greatly in the various parts of the country. The Zabaikal Province is distinguished by its dry continental climate, cold winters and comparatively hot summers. The nights and mornings during the summer months are, however, cool and refreshing. The atmospheric moisture is very small. Spring does not begin before the latter part of April and vegetation begins to show signs of life in May. The climate of the Maritime and Amur Provinces is rather cold. This is explained by the proximity of the Okhotsk Sea and the prevailing north, northeastern and northwestern cold winds. The climatic conditions of the interior of the country, which is protected by mountain ridges, are considerably milder and generally more favorable. The atmospheric moisture is considerably greater than in the Zabaikal Province. Vladivostok, although situated 0.75° higher than the city of Nice and 2.5° lower than the city of Venice, differs greatly from them in climate. The weather is cold and usually accompanied by more or less severe northeast winds. The thermometer reaches as low as minus 25-30 degrees Centigrade. Spring weather is rather cold. Beginning with April, fogs and rains are rather frequent. The summer temperature goes up to plus 25-30 degrees Centigrade. The best season is autumn, beginning in August and lasting till the end of October. The days then are sunny and warm.

CHAPTER IV.

POPULATION.

The greater part of the Russian population of the Far Eastern Republic is the peasantry from the southern provinces of European Russia, which had emigrated to the Russian Far East because of the shortage of land (most of the land was in the hands of the land owners). Some of the peasants, belonging to various religious sects, so-called "Sectants," emigrated with their families because of religious persecution by the Czarist Government. A considerable part of the population is composed of Cossacks, who are living in the Amur (Amur Cossacks) Zabaikal (Zabaikal Cossacks), and Maritime (Ussuri Cossacks, who were formerly part of the Amur Cossacks but who formed a separate group in 1889) Provinces. The following table gives the population in round figures according to the Provinces.

Population by Provinces
(round figures)

Province	Rural Population	Urban Population	Total
Pribaikal) Zabaikal)	675,000	223,000	898,000
Amur	242,000	158,000	400,000
Maritime) Priamur*)	436,000	296,000	732,000
Totals	1,353,000	677,000	2,030,000

At the present time the population is more than two million because of the large number of refugees from Russia, including the former Kolchak army which arrived from Russia

*The Russian half of the Island of Saghalien is included in the Priamur Province. Its population is 18,900.

during and towards the end of the civil war. The refugees flocked mainly to the cities. The city of Vladivostok, particularly, which according to the statistics of 1917 had a populotion of 151,000, increased its population. At the present time the population of Vladivostok greatly exceeds that of 1917.

In the total figure given for the population of the Zabaikal Province (including the Pribaikal Province), there are included 101,000 Buriats and Mongols, who are living in this territory and are enjoying wide national cultural autonomy in accordance with the Constitution of the Republic. In the population of the Amur Province are included 9,500 Giliaks and other small tribes.

The approximate numbers of Chinese, Koreans and Japanese who reside in various parts of the territory of the Far Eastern Republic are as follows:

Location	Chinese	Koreans	Japanese
Vladivostok ..... (Maritime Province)	39,187	4,180	3,668
Rural Communities ..... (Maritime Province)	5,468	36,235	——
Blagoveshchensk ..... (Amur Province)	4,513	306	10

In the Zabaikal and Pribaikal Provinces there are over 25,000 Chinese and Koreans, principally Chinese.

Considering the vastness of the territory, the population of the Far Eastern Republic is very small. The Far Eastern Republic can accomodate at least five times as many people as live there at the present time. This increase in population can undoubtedly be effected by a well organized policy of colonization, by transporting part of the peasant population of Russia,particularly from Ukraine. The density of the population of the Zabaikal and Pribaikal Provinces is four per square mile; of the Amur Province, 2.5 per square mile; and of the Maritime and Priamur Provinces (including Russian Saghalien), 2.6 per square mile. The density of the Maritime Province alone is considerably greater. The Priamur Province is very sparsely populated.

As is evident from these figures, the rural population of the Far Eastern Republic is more than 65 per cent of the total

population of the Republic. The total number of populated centers of the rural population in the Republic is 2,919. They are distributed as follows:

Province	Number of Centers
Pribaikal	634
Zabaikal	809
Amur	725
Maritime and Priamur	751

CHAPTER V.

MEANS OF COMMUNICATION.

1—RAILROADS.

The railroads of the Russian Far East have been systematically subjected to destruction for almost three years. Civil war, originally fanned by foreign intervention in general, and later, after the departure of foreign troops in 1920, particularly by the Japanese, inevitably reflected upon the condition of railroad transportation. The tracks, bridges, and other railroad appurtenances, were dynamited. Many of the wooden bridges and buildings were burned down. Only after the departure of the Japanese troops from the territory of the Amur, the Pribaikal and the Zabaikal, and part of the Priamur Province, and after the driving out of the Semenoff and Kolchak bands which followed the withdrawal of the Japanese troops, could the reorganization of transportation begin.

The Far Eastern Republic inherited from the Russian Empire the following railroads:

1.—**The Amur Railroad**—running from Station Karimskaya on the Chita railroad to the city of Khabarovsk—1,254 miles (a branch of 62 miles connects this railway with the city of Blagoveshchensk).

2.—**The Chita Railroad**—conencting the Trans-Siberian with the Chinese Eastern and the Amur Railroads—648 miles long.

3.—**The Ussuri Railroad**—555 miles long, connecting Khabarovsk with the cities of Nikolsk and Vladivostok (a branch of 48 miles connects the Suchan coal mines with the city of Vladivostok.)

4.—**The Sretensk Railroad**—running from Station Karimskaya on the Chita Railroad to the City of Sretensk on the nav-

igable River Shilka—168 miles. The city of Nerchinsk is connected with this railway by a branch railway of 6 miles long.

THE AMUR RAILROAD.

The Amur Railroad, all of which is on Russian territory, was built for strategic purposes in view of the fact that the Chinese Eastern Railroad (from Station Manchuria to Station Pogranichnaya, 925 miles, and from Harbin to Kuanchendzy 148 miles), which connects two parts of Russian territory which are separated by Manchuria, is built on foreign (Chinese) territory. The Chinese Eastern Railway, although it is a Russian railway, and of as great importance to Russia at the present time as in the pre-revolutionary period, and also of great importance to the Far Eastern Republic, cannot be so dependable as a railroad which is built entirely on Russian territory. The Amur Railway, which fulfills these requirements, unfortunately was not fully completed at the time the world war began. It is still unfinished, although it has been in use for several years.

The Amur Railroad, which passes through a very fertile part of the Amur Province, rich in natural resources (gold, etc), must play a great part in the development of the country, but it requires a considerable expenditure before it can be brought into proper condition so as to be operated successfully. The railroad stretches from Kuenga to Khabarovsk, 1,254 miles, and has 192 miles of branch lines connecting it with the harbors of the Amur River. During the civil war, the road suffered greatly. 419 wooden and 9 steel bridges were destroyed. Among the latter was the greatest bridge in Siberia, the Alexeevsk Bridge, which crosses the Amur River at Khabarovsk. Two of its spans, 420 feet each, have been blown up. A ferry is being used temporarily, until the bridge will be repaired. In the winter the rails are laid on the ice of the river, and trains are drawn by special, small engines. Among other bridges that require much repairs may be mentioned the bridge across the river Tom, 770 feet long, and a bridge 840 feet long across the River Arkhara.

The water supply on the Amur Railroad is not in a satisfactory condition. Of the 47 water tanks only 11 have been fully completed.

The shops and depots which have been built on ground which is eternally frozen, and on a stretch of 700 versts of railroad, are not in a satisfactory condition. At the present time, except in emergency cases, not more than two trains, one each way, per week travel in the district of Kuenga—Bochkarevo—Blagoveshchensk, and to Khabarovsk not more than four trains daily, two trains each way.

Theoretically the carrying capacity of the road, according to the conditions of the road bed and the water supply in the majority of the districts, is not more than four trains per day, two trains in each direction. In urgent cases, however, as, for instance, for military purposes in connection with Japanese occupation in the Maritime Province, it was necessary at times to dispatch a greater number of trains, which was managed, although with difficulty.

THE CHITA RAILROAD.

The Chita Railroad has a double track from Junction Mostovoy to Junction Kitaisky, 431 miles, and a single track from Junction Kitaisky to Manchuria, 226 miles, and to Sretensk 160 miles. During the civil war, 98 wooden bridges and 36 steel bridges were burned down or dynamited. Some of these bridges have been restored entirely and some by temporary wooden structures, The carrying capacity of the road in general may be estimated as 24 trains per day, 12 each way.

At the present time, although the road is not operated fully, it has greatly improved and is still improving daily. Passenger trains cover the distance from Station Manchuria to Chita in 16 hours, which almost equals the pre-war speed.

THE USSURI RAILROAD.

The Ussuri Railroad was in a better condition because of its assured supplies. It has been aided a great deal by the Inter-Allied Railway Committee, but the fact that the principal part of the railroad is in the zone of Japanese occupation, and because of the constant Japanese military activities, its condition is made conisderably worse. The population, which has become embittered because of the cruelties and violences of

the Japanese and the bands of Semenoff and Kolchak soldiers who are supported by the Japanese, has been compelled in the because of the constant Japanese military activities, its condi- damage it considerably. The Japanese do not permit a single car or locomotive outside of the zone of their occupation, thus carrying their domination of a foreign country to the extreme.

ROLLING STOCK.

On the 15th of December, 1920, the number of locomotives and cars in the depots was as follows:

Railroad	No. of Locomotives	No. of Cars
Amur	169	2,809
Chita	279	4,315
Ussuri	220	4,713
Total	668	11,837

Part of these locomotives and cars was in need of repairs.

Since that time conditions improved only on the Chita Railroad where the work of repairing the locomotives and cars has been organized satisfactorilly. Some locomotives and cars were also received from the Chinese Eastern Railway and from Russia. At the end of 1921 the number of cars on the Chita Railroad had reached 8,000; that on the Amur—3,700. The number of locomotives on the Chita Railroad was at that time over 300. The telegraph system of the railroads is more or less satisfactory, although not what it ought to be.

The railroads need parts of locomotives, babbit metal, iron, various pipes, wire, tires, graphite, lighting and oiling materials.

CARRYING CAPACITY OF THE RAILROADS.

Some idea of the capacity of the Chita, Amur and Ussuri Railroads, and their work, can be had from the following table, given for three months in 1921.

Railroad		Loaded and Shipped: Average Number of Cars per Day	Loaded and Shipped: Average Number of Cars per Month
Chita—	July	118	2,959
	August	134.5	3,381
	September	170.2	4,255
Amur—	July	59	1,468
	August	74	1,849
	September	41	416
Ussuri—	July	66	1,981
	August	67.3	2,020
	September	40	1,200
	Totals	770	19,529

Remark: The capacity of a freight car is 1,000 poods, or about 17 tons.

In pre-war years the Chinese Eastern Railroad shipped over the Ussuri Railroad to Vladivostok about 30-40,000,000 poods of beans and grain annually.

It must be noted that the Ussuri Railroad began to resume its activities very satisfactorily in 1921, under the rule of the Far Eastern Republic, and only the overturn of May 26th, 1921, in Vladivostok, which was organized by the Japanese with the aid of the remnants of Semenoff and Kolchak armies, armed by the Japanese, interfered with this work.

This fact is clearly evident from the following figures: from January 1st to June 30th, 1921, the total number of cars arriving in Vladivostok from Station Pogranichnaya (on the frontier of Manchuria) was 14,000, an average of 2,333 cars per month. During March the number of cars was 521; during April—3,122; and during May—5,484. After that date (i. e., after the overturn of May 26th), there is a decrease in the number of cars, as is evident from the table shown above (Ussuri Railroad).

The table given below gives additional figures about the work of the Chita and Amur Railroads.

Total Work of Roads in Loading and Receiving from Neighboring Roads

Railroad	*Month 1921*	*During One Month*			*Average Per Day*
		Cars Loaded	*Cars Rec'd*	*Total*	
Chita—	July	2,959	1,422	4,381	175
	August	3,381	1,325	4,706	188
	September	4,255	748	5,003	200
Amur—	July	1,468	240	1,708	68
	August	1,849	620	2,469	98
	Sept. (10 days)	416	516	932	93
Totals	July	4,427	1,662	6,089	243
	August	5,230	1,945	7,175	286
	September	4,671	1,264	5,935	293

Comparing these figures with those of the past years, as shown in the table below, a considerable decrease in the railroad transportation becomes clearly evident. But this decrease is easily explained if political conditions of the country during the last few years are taken into consideration, and also the fact that the country has been separated from Russia and the Russian markets.

Pre-War Capacity of the Railroads

Year	Railroad	
	Ussuri	Chita
	in short tons per year	
1912	953,532	381,055
1913	1,554,109	424,089
1914	1,421,878	306,531

Transportation of Manchurian beans on the Ussuri Railroad played an important part in the sum total of its freight. A general idea of the character and quantity of the freight carried on the Ussuri Railroad prior to the war and prior to the country being cut off from Russia, i. e., normal times, can be seen from the figures for 1913.

Transported in 1913 on the Ussuri Railroad

Article	Quantity (in tons)
Beans	374,472
Wheat	73,566
Oats	42,102
Millet	8,136
Goalen	2,916
Buckwheat	4,392
Barley	2,520
Linseed	16,794
Wheat flour	25,974
Oil Cakes	21,492
Straw	3,726
Hay	22,014
Total agricultural products	598,104
Board Lumber	82,566
Other Lumber	68,832
Wood	99,666
Total lumber and wood	251,064
Coal	217,674
Rails	22,500
Railroad equipment	3,852
Concrete	73,152
Cement	29,502
Lime	12,114
Asphalt	1,872
Bricks	23,850
Total building material	166,842
Fish	11,923
Caviar	4,907
Salt	59,076
Total salt and fish	75,906

Article	Quantity (in tons)
Tea	71,640
Rice	7,668
Canned goods	3,420
Iron	9,216
Tin plate	3,690
Iron Manufactures	9,720
Agricultural implements	8,226
Kerosene	5,130
Various machinery	2,664
Soda	2,124
Meat	7,074
Cabbage	5,976
Potatoes	7,290
Apples	2,718
Sugar	5,724
Bottles	3,240
Others	85,345
Total miscellaneous	172,879
GRAND TOTAL	1,554,109

The percentage of the various products is as follows:

Article	Percentage (of entire shipment)
Beans	24
Other agricultural products	14
Lumber and wood	16
Coal	14
Building material (except lumber)	11
Fish and salt	5
Tea	4
All other	12

Manchuria with its annual crop of over 5,000,000 tons is a constant source of freight for the Ussuri Railroad for transportation to the port of Vladivostok, and, morever, during the

summer months it provided freight for ships going from the River Sungari (Harbin) along the Amur to Port Nikolaevsk (on the Amur). During the year 1914, the Ussuri Railroad carried from Manchuria 387,341 short tons, of which 341,276 were beans. In 1915 it carried 508,964 tons, of which 422,329 tons were beans. During nine months, January to September 1921, 19,467,036 poods, or 324,450 tons, were carried, which makes a total per year of 434,600 tons.

Some idea about the character and quantity of freight carried by the Chita Railroad to the Zabaikal Province can be had from the following table giving figures for about three months in 1921.

TABLE OF FREIGHT CARS RECEIVED AND DISPATCHED BY THE CHITA RAILROAD FROM JULY 1st TO SEPTEMBER 21st, 1921 AND KIND OF FREIGHT

	Station Manchuria						*Station Missovaya*					
	Received			*Dispatched*			*Received*			*Dispatched*		
Kind of Freight	*July*	*Aug.*	*Sept.*	*July*	*Aug.*	*Sept.*	*July*	*Aug.*	*Sept.*	*July*	*Aug.*	*Sept.*
Grain Prod.	...	...	...	34	115	130	18	..	..	6	..	..
Lighting Materials	...	...	...	32	...	...	5	..	..	..	..	..
Sugar	...	...	...	2	6	3	...	..	..	..	..	..
Cereals	...	...	...	2	6	5	...	..	..	..	..	..
Groceries	...	...	...	10	9	17	...	..	..	..	..	..
Tea	...	...	...	3	3	...	1	..	..	2	..	..
Rails	...	...	6	...	...	12	...	..	..	..	..	..
Iron	...	...	...	3	...	2	...	..	..	..	..	..
Copper	...	...	...	...	4	...	...	..	..	..	..	..
Min. Coal	34	84	10	...	...	...	...	..	..	..	..	..
Charcoal	1	1	...	...	...	...	...	..	..	..	..	..
Wood for fuel	44	39	11	...	...	...	7	..	..	..	..	..
Machine parts	...	...	...	...	12	...	...	..	..	..	..	..
Sleepers (ties)	2	...	3	...	...	...	...	..	..	..	..	..
Lumber Materials	2	5	6	...	1	...	...	..	..	..	..	..
Salt	...	...	...	...	...	...	70	..	..	..	..	..
Freight cars	22	1	69	...	...	...	...	..	..	..	..	..
Military												

Kind of Freight	Station Manchuria						Station Missovaya					
	Received			Dispatched			Received			Dispatched		
	July	Aug.	Sept.	July	Aug.	Sept.	July	Aug.	Sept.	July	Aug.	Sept.
freight	...	...	...	...	...	...	141	..	..	45	..	..
School books	...	...	...	...	...	3	18	..	..	..	..	..
Soap	...	...	...	2	...	...	...	..	..	..	..	..
Bristle	...	...	...	5	...	...	...	..	..	..	..	..
Lime	...	...	...	...	...	...	6	..	..	..	..	..
Furs	...	3	...	...	...	...	...	..	..	..	..	..
Tobacco												
Tob. Prod.	...	...	...	7	1	...	...	..	..	..	..	..
Varia	8	3	22	23	23	33	9	..	..	20	..	..
Fish	...	...	...	5	2	...	...	..	..	..	..	..
Live stock	1	...	...	5	...	...	...	..	..	..	..	..
Fats	...	...	...	5	1	...	...	..	..	..	..	..
Paper	...	...	...	4	...	2	...	..	..	..	..	..
Various												
Materials	4	...	...	34	15	4	67	..	..	6	..	..
TOTAL												
Freight	118	136	127	195	198	212	342	..	..	79	..	..

NUMBER OF RAILROAD EMPLOYES,

In connection with the general difficult financial situation, due principally to Japanese intervention in the Russian Far East, the number of railroad employees had to be decreased considerably. This decrease was accomplished gradually in 1921, as is evident from the following table:

Railroad or Department	Number of Employees			
	Jan. 1st	May 1st	July 1st	Oct. 1st
Ministry of Transportation (Central Department)	339	305	311	234
Chita	16,818	16,219	13,042	11,627
Amur	9,284	9,284	8,400	4,575
Ussuri	11,845	11,625	3,000	2,350
Dept. of River Navigation and Dept. of Highways.....	5,459	5,459	4,893	3,000
TOTAL	43,745	42,892	29,646	21,792

There was a small decrease after October as well. The considerable decrease in the number of the railroad employees from May to July on the Ussuri Railroad does not mean an actual decrease but the cutting off of a part of the railroad from the control of the Far Eastern Republic. After the Japanese overturn on May 26th, in Vladivostok, part or the Ussuri Railroad from Vladivostok to Station Evgenievka and from Nikolsk to Station Pogranichnaya (i. e. zone of Japanese occupation) remained in the hands of the Japanese. Thus the actual decrease of employees took place only in a part of the Ussuri railroad which is under the control of the Far Eastern Republic, i. e., from Stations Evgenievka to Khabarovsk.

THE FUTURE OF THE FAR EASTERN REPUBLIC RAILROADS.

Speaking of the problem of the future of the railroads of the Far Eastern Republic, it is necessary to state that in spite of the present very difficult conditions, improvement is quite evident in the repairs of the road beds, convenience of passenger traffic, speed, etc. The necessity for the Manchurian products to find a carrier on the one hand, and the vast Siberian and Russian markets on the other, in themselves hold out a promising future for the railroads of the Far Eastern Republic. As a result of the industrial development of the Far Eastern Republic, connected with the development of its vast natural resources, a great future for the railroads of the Far Eastern Republic is assured.

The development of the natural resources makes imperative the building of new railroads. For instance, plans are being made to connect St. Olga Bay with the Ussuri Railroad as there are tremendous quantities of iron ore in the district. It is also being planned to connect Khabarovsk with the Imperial Harbor as there are immense forest resources there, and it is a very good outlet to the ocean; and to connect Nikolaevsk on the Amur and De Kastri with Alexeevsk on the Amur Railroad.

2.—RIVER TRANSPORTATION.

The great length of the river Amur and its tributaries, and the fact it is navigable not less than six months in the year,

make it of extreme importance in the economic life and development of the Far Eastern Republic.

The total distance of all rivers suitable for navigation purposes is 14,000 miles. The investigated navigable part is about 4,500 miles. The following table shows the navigable distance of the respective rivers.

THE AMUR RIVER AND ITS AFFLUENTS

River	Navigable Distance (in miles)
Amur	1,800
Shilka	250
Argun	280
Zeya	466
Selemdzha	220
Bureya	290
Amgun	270
Ussuri	320
	3,896
Selenga	420
Total	4,336

The depth of the Amur River between Khabarovsk and Nikolaevsk is not less than 10 feet; between Khabarovsk and Blagoveshchensk—4¾-6 feet; between Blagoveshchensk and Sretensk down to 3½ feet. Five dredges are maintaining a navigable depth on the various sand bars of the above rivers.

The principal river harbors of the Amur River are as follows: Blagoveshchensk, Alexeevsk, Sretensk, Zeya-Pristan, Dzhalinda, Khabarovsk and Nikolaevsk.

The principal water artery of the Republic, the Amur River, flows at a considerable distance along the railroad, and through its connections with the railroad by trunk lines serves as a means of transportation for freight coming from the ports of the Pacific Ocean to the Russian Far East and Russia. The Amur River thus plays the part of a second track of the railroad, supplementing the single track of the Amur and Ussuri Railroads and making its capacity equal to the general carrying capacity of the double track, Zabaikal Railroad.

The mouth of the Amur River gives a second outlet for this combined route to the sea at the Nikolaevsk Port. The Amur River, as well as the railroads, serves as the principal route for the movement of the freight of the Republic.

The tributaries of the Amur, Rivers Zeya and Bureya, and also the tributary of Zeya—Selemdzha, run perpendicularly across the province from one border line to the opposite one, and thus provide secondary river routes. Tertiary branchings of these tributaries cut across the entire province and open accesses to its mineral wealth.

The first steamer appeared on the Amur River and the Shilka River in 1854. In 1911, according to the statistics of the Department of Water Routes, the Amur Merchant Fleet had in navigation that year 523 ships, the tonnage of which was 6,813,930 poods (113,565 tons). The fleet was composed as follows:

Kind of Ship	Iron	Wood	Tonnage (poods)
Steamer	96	92	1,171,220
Barge	162	115	5,635,100
Tug Boats	21	15	2,040
Motor Boats	9	13	5,570

The horse power of the 176 power ships was 44,017, and the value of all the merchant ships, not counting shore equipment, according to pre-war prices was 20,810,616 gold rubles.

Besides these ships there were also government service ships of the Department of Water Routes, and also war vessels. Altogether there were 33 government ships which consisted of the following:

Kind of Ship	Iron	Wood	Tonnage (poods)
Steamer	7	—	13,000
Barge	8	10	314,100
Tug Boats	7	1	550

The horse power of these ships was 1509.

Almost all of the bodies of the iron and steel boats and barges were manufactured abroad or in the ship yards of European Russia, such as the Sormovo, Votinsk and Finnish. The greater part of the rear-wheel wooden steamers were built in local ship yards from drawings made in America.

During the later years, steamers of the so-called "Volga" type appeared on the Amur. These mixed freight-passenger steamers were not intendd to be used as tugs. They were of a light type and carried up to 20,000 poods of freight and a considerable number of passengers, first, second, third and fourth class.

Should the ten years from 1901 to 1911, after the building of the Chinese Eastern Railroad, be considered, when the policy of penetration first into the whole of Manchuria and later, after the Russo-Japanese war, into the northern part of Manchuria by the Czar's Government, reached the height of its development, then considerable results are evident. The number of steamers increased 80%; the tonnage increased 27%; the number of vessels without mechanical power—52%, and their tonnage 40%. This development was aided also by the commencement of the Amur Railroad and the anticipated results issuing from the development of the country due to the building of the railroad, and later, the growth in the exportation of beans from Manchuria through the Sungari and Amur Rivers to Nikolaevsk for further shipment to various markets. The Amur fleet, after its development as indicated above, was capable of transporting from twelve to fifteen millions of poods of freight from two ports, Nikolaevsk and Khabarovsk, to Sretensk,

The Chinese Eastern Railroad had and still has its own fleet on the Sungari River. It consists of 23 steamers, and 49 barges, with a total capacity of 1,800,000 poods., There was, as often happens, competition between the Chinese Eastern Railroad and the Amur Merchant Fleet. The railroad tried to retain all of its freight of Manchurian beans for transportation by rail to Vladivostok, and established a special low tariff for this freight. The Amur fleet tried to obtain part of this freight for transportation on the Sungari and Amur Rivers to Nikolaevsk. The Sungari was of great importance in the development of the Amur fleet. The following table will serve as an illustration of the importance of the Sungari:

	From Amur to Sungari		*From Sungari to Amur*		*No. Passengers carried*	
Year	*Steamer*	*Barge*	*Steamer*	*Barge*	*From Amur*	*To Amur*
1908	211	227	209	227	7,913	11,919
1909	233	277	233	277	13,628	21,621
1910	240	359	240	358	20,922	33,871

In 1903 the total carrying capacity of the Sungari, not counting the local freight and the local Chinese shipping amounted to 26,878,945 poods. In 1906 it amounted to 20,834,234 poods. From the ports of Sungari to the ports of the Amur was carried during the navigation of 1910 (besides the local freight) to the ports of upper Amur 5,815,717 poods, and to the ports of lower Amur 3,749,248 poods.

Altogether during that year 9,559,025 poods of various freights were carried by this route from Manchuria to the Amur. In 1913, 1,200,000 poods of beans were shipped through Nikolaevsk to western European markets.

The return traffic to the Sungari River was never so large. In 1910 the inward freight was 261,775 poods, of which 219,000 poods were Amur fish. That year may be considered as the average. For four years, 1907-1910, inclusive, 501 ocean going vessels arrived in Nikolaevsk. The freight brought in by them and carried out by them was as follows:

Year	Number of Ships	Quantity Incoming Freight poods	Quantity Outgoing Freight poods
1907.....	131	3,885,117	1,298,579
1909.....	145	3,015,677	1,443,671
1910.....	101	4,571,128	2,302,911

The freight from Nikolaevsk consisted of large quantities of fish shipped to Japan.

In accordance with the treaty of Peking of 1860, and the treaty of St. Petersburg of 1881, only Russians and Chinese are permitted to navigate the Sungari and Amur Rivers. The Japanese have made many efforts, and are now particularly active in trying to receive the right of navigation of these rivers. Not having the open opportunity, the Japanese are trying to achieve their aim under the mask of Chinese and even Russian flags.

Since the time of the revolution, and especially since intervention, the Amur fleet was considerably weakened. The owners of many ships, in spite of the strictest prohibition by law, sold Amur ships to foreigners, (this law was first introduced by the Czarist Government), removed many steamers to Harbin and sold during the year 1918, the first year of intervention, about 40 ships, principally to Chinese. Some of these sales may have been fictitious.

At the present time the Russian Amur fleet is as follows:

Steamers	*Quality*	*Horse Power*	*Tonnage poods*
Mail-Passenger-Freight	29	9,175	226,400
Freight-Passenger, with tugging arrangements	6	1,740	16,600
Tug Boats	26	6,770	.....
TOTAL	61	17,685	243,000

To this must be added 103 barges with a tonange of 2,578,000 poods. Thus the tonnage of the whole merchant Amur fleet equals 47,016 tons. At the present time in the Amur River there are being operated: 1) "The Amur State Fleet", operated by the Government; 2) "The Amur Company of Shipping and Trade", which is owned by private individuals.

All ships were to be employed in freight and passenger traffic in the following lines:

Name of Line	*Distance in Miles*	*Number of Trips per month*
Sretensk-Blagoveshchensk (Upper Amur Line)....	807	8½
Blagoveshchensk-Khabarovsk (Central Amur Line)	620	10½
Khabarovsk-Nikolaevsk (Lower Amur Line).....	591	12
Blagoveshchensk-Zeya (Zeya Line).....	415	10
Blagoveshchensk-Ekimchan (Selemdzha Line)....	483	5
Blagoveshchensk-Chekunda (Bureya Line).....	400	3
Pokrovka-Olochi (Argun Line)	267	3
Lokhososu-Harbin (Sungari Line)	571	..

The number of trips of the Sungari line was to be determined by the actual necessity, which varied a great deal.

Political conditions connected with Japanese aggressiveness, the seizure by them of Nikolaevsk on the Amur, made conditions very unstable and detrimental to the people of the Far Eastern Republic. According to the figures of the Shiping Inspection of the Amur basin, the movement of freight for three months, May, June and July 1921, was as follows:

Month	*Freight Shipped and Received*		
	On Steamers and those tugged by steam power in poods	*Rafts in poods*	*Total Quantity in poods*
May	141,820	191,940	333,760
June	256,652	1,033,345	1,290,197
July	657,006	690,050	1,347,056
TOTAL	1,055,478	1,914,535	2,971,013

There are no definite figures for August and September but they were higher than those for the preceding three months According to reports regarding navigation on the Amur River for the first month of the season of 1922 the amount of freight carried during that month is greater than for the entire season of 1921. If the figures for the ten years, 1901-1911, which were given above, should be taken into consideration, the quantity of freight on the Amur increased from 340,000 to 1,500,000 tons (i. e., it increased four times), and the considerable drop in the quantity of freight in the recent years becomes clearly evident. The principal cause of the decrease in the quantity of freight can be attributed to allied intervention, particularly that of the Japanese.

The principal river harbors, important for their facilities as well as the quantity of freight handled, are the following in the order named:

1. Blagoveshchensk.
2. Khabarovsk.
3. Sretensk,
4. Nikolaevsk.
5. Zeya-Pristan.

The harbor of Blagoveshchensk handled 32% of the total freight of the Amur system; Khabarovsk—14%; Sretensk—8½%; Nikolaevsk—7.8%; and Zeya-Pristan—3%. The mouth of the Sungari passes to the Amur 16% of the total freight of the basin, and the rest of the small harbors handle about 17%.

Commodities carried on the Amur River can be classified in the following manner:

Article	Percentage
Grain (wheat, oats, etc.)	42%
Fish	8.7
Tea	3
Salt	1.6
Groceries	2.9
Iron	1.8
Various	40.

Of the 42% grain freight the quantity of oats is 6%, and the rest is wheat.

The importance of Zeya for the district is significant. The

rich gold mines scattered throughout the upper part of the Zeya and its tributary Selemdzha employ a great number of workers who produced annually up to 400 poods of gold worth $4,000,000, (these gold mines in the near future ought to play a very important part). The fertile valleys inhabited by an agricultural population give very good crops, the surplus of which is shipped to Blagoveshchensk and other markets.

The following table shows when the rivers in the Amur basin are open to navigation:

River	*Principal Harbor*	*Breaking up of Ice in River*	*Freezing of River*
Shilka	Sretensk	April 5—29	October 11—30
Amur	Blagoveshchensk	April 8—20	October 22—Nov. 5
Amur	Khabarovsk	April 7—20	October 29—Nov. 16
Amur	Nikolaevsk	April 28—May 12	October 21—Nov. 5
Zeya	Zeya-Pristan	April 15—29	October 11—24
Ussuri	Khabarovsk	April 7—19	October 29—Nov. 10
Ussuri	Iman	March 23—April 9	October 24—Nov. 11

With the general restoration of the whole country commercially and industrially, which has already begun in the territory liberated from foreign troops, the Amur Basin will undoubtedly not only assume its former place, that properly belongs to it, but will even surpass it. The whole problem now lies in the liberation of Nikolaevsk, and other territory of the Far Eastern Republic occupied by the Japanese.

The Russian Volunteer Fleet operated several fair-sized vessels between Vladivostok and foreign and Russian ports. Its ships plied between Vladivostok and Japanese, Chinese, American, and other foreign ports. At the present time, because of Japanese intervention, the Volunteer Fleet has curtailed its functions considerably, but after the departure of the Japanese troops it will resume its previous activities.

3.—HIGHWAYS.

The future of the Far Eastern Republic depends on the organized exploitation of its vast natural resources. There are two obstacles to the development of these resources on a very large scale: first, the sparseness of the population of the vast territory (2,030,000 people, to a territory of 1,690,568 square

kilometers); second, insufficiency of highways compared to the great distances of the Republic.

The first problem can be solved by an organized policy of colonization of the country by the surplus peasant and other population of Russia, which plan has been taken into consideration by the Government of the Far Eastern Republic.

The second can be solved by organized building on a net of highways. Together with the railroads and water routes, highways are of tremendous importance. The purpose of highways, among others, is on the one hand to carry through the territory of the country commodities for export, and to direct these commodities into the principal routes, and, on the other hand, to distribute among the population the imported goods received from the principal routes. By these highways it will be possible to reach the known vast mineral deposits. Through these roads it will be possible to find and explore many new mineral deposits which are believed to be just as vast. These roads will give an additional opportunity to exploit the forest wealth.

Many of the gold mines which have been opened, and which are not being worked at the present time can once more produce a large quantity of gold if only a convenient and cheap access for dredges and workers and supplies were created.

The majority of the roads of the Far Eastern Republic, as in Russia itself, came into existence in a natural way, under the influence and demands of local life. The primitive pack trail turned into a dirt road; later it became a post road, and then it had to be improved and repaired by the local population by Government orders, but without the participation of any technically qualified builders. It is not surprising, therefore, that there often are great difficulties for travel on these roads, especially in rainy weather, because of lack of bridges and well organized crossings, steep cliffs and poorly constructed road beds.

More or less regular technical construction of roads in the Russian Far East began to take place about ten or fifteen years ago, first under the direction of the Emigration Department, and then by the Ministry of Ways of Communication. Unfortunately all the roads that had come into existance naturally,

as well as those that were especially constructed during the last few years, were, for general reasons indicated above, left without improvement and repair, and in places suffered a great deal from civil war, fanned by intervention. Some roads require only small repairs in order to be fit for equestrian traffic as well as for automobile and tractor traffic. Some other roads, particularly those built by the local population, demand more or less greater repairs in order to be fit for such transportation.

From the national point of view, as well as from the point of view of the local population, besides improving the existing roads it is of no less importance to build new roads. The impossibility of a wide development in the immediate future of railroad construction, due to the economic conditions, and the large requirements for roads, make it essential to consider the building of highways which are less expensive, but which would be constructed so as to permit automobile and tractor transportation.

With the growth of the quantity of freight carried on the highways, a necessity will arise for strengthening the road beds, and gradually transforming them into macadamized roads. The success of automobile traffic abroad, especially in America, and the colossal development of the highways and macadam roads occasioned by it, give a basis for the belief that in the Far Eastern Republic improved highways will for a long time take place of railroads.

In the near future it will be possible to organize, either through the Government or by private means, automobile and tractor transportation of freight on the same commercial basis existing at the present time on the railroads and water routes.

Because of the similarity of the geographical conditions of North America and the Russian Far East, it may be expected that in the near future the successful application of mechanical means in the construction of new roads and in the improvement of old ones in the Far Eastern Republic will take place.

ZABAIKAL PROVINCE (INCLUDING PRIBAIKAL PROVINCE)

In the Zabaikal Province at the present time there are 1691 miles (2,536 versts) of post roads, and 694 miles (1,041 versts), built by the Emigration Department. A small net of

roads about 100 miles (150 versts) long, fit for automobile traffic, was built during the war by the Ministry of Ways of Communication in the district of the tungsten deposits of the Nerchinsk mining district, which made possible the development of the tungsten mining. Besides this there is a net of village roads and pack roads, the length of which is unknown. There are no macadamized roads in the Zabaikal Province. Many of the roads of the province can be quickly made fit for automobile traffic at a small expenditure of money for their repair. These roads require principally the construction and repair of river crossings and the construction of bridges. A plan has been prepared for the building of new roads along the entire frontier of the Zabaikal Province, with China, and the cross roads to the railroad line. Besides, plans have also been prepared for two or three roads leading to the rich gold deposits of the Bargusin and Vitim forest area. If these roads are built, then the principal roads of the Zabaikal Province will be about 4,000 miles (6,000 versts.)

AMUR PROVINCE.

The Amur Province has a comparatively large net of highways. The following is the mileage of the roads.

	Road	Mileage
1.	Government Roads	2,589
2.	Provincial Roads	1,165
3.	County Roads	507
4.	Township Roads	730
5.	Village and Farm Roads	1,029
	Total	6,020

The principal roads of the Amur Province are located in the stretch between the Amur Railroad and the Amur River, especially in the grain district between the lower part of the Zeya and Bureya. In the northern part of the province in the gold mining district there are a few roads, not counting the unfinished roads of Dzhalinda, Zeya and Nikolaevsk.

The proposed plan for additional roads in the Amur Province has in view the construction of roads which would be connected with the trade centers of the Priamur District, with

the west, east, north and northwest, specially with the gold mining districts and the districts which are to be colonized in the Priamur territory.

The connection of the Amur Province with the economic center of Manchuria-Harbin, is maintained in the summer by steamers on the Sungari River. There is also an automobile road between Tsitsikar on the Chinese Eastern Railroad and Sakhalyan, a Chinese city on the Chinese side of the Amur River, opposite which is Blagoveshchensk, the principle center of the Amur Province. To connect the Amur Province on the northeast with the lower part of the Amur there was outlined, and partially built, the Nikolaevsk road: Blagoveshchensk-Nikolaevsk, a total distance of 889 miles. The significance of this road is very great. Blagoveshchensk is the Government center of the Amur Province, and the chief commercial industrial point in the Priamur District. It has a surplus of grain, and is located near the largest gold mining centers. Nikolaevsk is a port for import and export trade in the Priamur District, the center of a large fishing industry of the lower part of the Amur and also of the gold mining industry of the Amgun District. The Nikolaevsk road will have to be the only permanent road between these two points. The distance between these two cities, by this road, is considerably shorter than by the river. It also crosses and connects with commercial—industrial centers, and with a net of main roads, three most important gold mining districts of the Priamur Province: Selemdzha, Niman-Bureya, and Amgun-Kerbin, which produced half of the gold mined in the district. At the present time there is a road from Blagoveshchensk to Khabarovsk warehouse along the Amgun River (691 miles) from where there is a regular steamer connection with Nikolaevsk.

To the north a road is being planned connecting the Amur Province with the city of Yakutsk, which is 1,867 miles from the nearest railroad. The connection with Yakutsk will give an access for cattle to the mining regions, and an outlet for the Yakutsk furs to the territory of the Far Eastern Republic. It is planned to supplement the existing roads which are in a suitable condition by repairing, finishing, and building new roads, by additional 4,667 miles.

Maritime and Priamur Provinces.

In the Maritime Province there are artifically built highways in the narrow strip along the Ussuri Railroad and in the southern part of the Ussuri District, i.e., in the most populated and cultural parts of the province. North of Khabarovsk (Priamur Province) there are a few roads. The roads Sofiisk-De Kastri has not been completed. Neither has the end of the Nikolaevsk road which connects Khabarovsk with Nikolaevsk, i.e. Kerbin Pass-Kerbi been finished. There are small roads among the lakes in the lower part of the Amur. For communication with the gold mines there are only pack roads. Beyond the railroad in the valleys of the rivers there are colonization roads which were built in recent years by the Emigration Department. Communication between Khabarovsk and Nikolaevsk in the winter time was by post roads (589 miles), or by ice across the Amur River.

In the Priamur Province there is a macadam road of 8.3 miles between Khabarovsk and the naval base.

In the district Nikolsk-Ussurisk (Martime Province) there are a few post roads which need repairs. Along the sea coast from Razdolnaya to St. Olga there is a shore road. Along the Ussuri Railroad there is an abandonned temporary road which may yet be of great importance.

In all there are in the Maritime and Priamur Provinces the following roads:

Road	Mileage
Macadamized Roads	8.3
Post Carriage Roads	565.0
Emigration Department Roads	1,600.0
Roads built by the Ministry of Ways and Communications	264.0
Total miles	2,437.3

The length of the smaller roads and most of the pack trails is not known.

It is planned to build a shore road from the lower Amur from Khabarovsk to Nikolaevsk, and also to reconstruct the abondonned road along the Ussuri Railroad. There is also a project to connect these roads in a few places with the sea-

shore across the mountain range Sikhota-Alin. For connecting the gold mining districts of the lower part of the Amur with Nikolaevsk and the sea coast, short distance roads are planned in the district of Lakes Orel and Chlya. Also outlets from the Nikolaevsk road to the Ud District and a branch for connecting Khabarovsk with the upper Amgun and Niman gold mining districts are planned. The building of the latter roads will greatly stimulate the gold mining industry in that region.

It is intended to repair and build 3600 miles of new roads in the Maritime and Priamur Provinces, which include the improvement of the very important road Khabarovsk-Imperatorsky Harbor (300 miles). This road is a direct continuation of the Amur River and Railroad route to the sea.

4. PORTS AND HARBORS

Among the ports and protected harbors which are of commercial importance at the present or which may become such in the immediate future, the following should be memtioned:

Vladivostok, Nikolaevsk, De Kastri, Imperatorsky Harbor, Bay of Peter the Great, Bay of St. Valentine, Bay of St. Olga, Bay of Alexandrovsk.

Of these only Vladivostok can be considered a fully equipped port in the real sense of the term. Of the others memtioned, Nikolaevsk and Alexandrovsk, which are already at the present time of great importance, require considerable improvements and expenditure of money before they can be made into modern ports.

De Kastri, Imperatorsky Harbor, and others, have all the natural requisites for becoming first class modern ports, but require considerable capital for their construction. The development or the economic resources of the country undoubtedly will, in the more or less immediate future, make it necessary to utilize these valuable gifts of nature.

Vladivostok

Vladivostok is situated on the southern end of Mooraviev-Amursky peninsula, and lies 43° 7' 5" north latitude, and

131° 54' east longitude. The stretch of land occupied by the city is washed by the Amur Bay on the western side and by the Ussuri Bay on the eastern. This peninsula has a length of 29 kilometers, and a total area of 330 square kilometers. To the south lies the Russian Island which is separated from the mainland by a strait called Bosphorus Vostochny, having a westward direction. Two kilometers before the Vladivostok Harbor it becomes round, and assumes the shape of a horn. The Zolotoy Rog is about six kilometers long, one kilometer wide, and has a depth of from eight to thirty meters. The town is built on the slope of the Sikhota Alin.

During high tide the water rises not more than one foot, which makes the harbor a safe refuge for ships. The port has good warehouses. For unloading operations there are over fifty cranes. The port can be used throughout the entire year. During the three or four months (December to March), when the Bay is covered with a thin layer of ice, the ice is cleared away by special ice breakers. The Ussuri Railroad has its terminal in Vladivostok. It connects first, Khabarovsk with the Amur Railroad, which in turn connects with the Chita Railroad, which leads into Russia; second, at Station Pogranichnaya, with the Chinese Eastern Railroad, which connects with the Chita Railroad at Station Manchuria and with the South Manchurian railway at Chang-Chun. Vladivostok is connected by a branch line with the large Suchan coal mines. From the port of Vladivostok ships leave for Kolima through the Arctic Ocean for trade and barter with the population of the northern Yakutsk Provinco, for Sakhalin, for the Black Sea (Odessa) for Japan, China, America, etc. The commercial importance of Vladivostok is great not only in regard to coastwise trade, but primarily as an export and import base of the Far Eastern Republic and Russia, and an outlet to the ocean for the five million tons of the annual crop of Manchurian beans and other products, and as the eastern port of the Far Eastern Republic and Russia. In spite of the temporary difficulties in the way of commercial and other activities in Vladivostok, due to the political situation it has a great future, and, in normal times, can successfully compete with its rival Dairen.

Nikolaevsk

The significance of Nikolaevsk as a port of special importance may be attributed to the fact that it is the center of the prosperous fishing industry of the district, as well as the river outlet, for the Manchurian market, and because the port is open almost six months in the year. The port of Nikolaevsk can receive sea going vessels with a draft of 16 feet, although at times ships with a larger draft come into the port. Large ships unload in the Nikolaevsk Bay. After an expenditure of some money for the deepening of the channels at the places where the Amur River flows into the sea, it will be able to accomodate large ships. Nikolaevsk never had sufficient port facilities, warehouses, etc. At the present time after the destruction which has taken place there, its restoration will require a large expenditure of money. The future for Nikolaevsk as a port is assured, because it is located in a district of vast fish, forest and gold resources.

De Kastri

De Kastri is located opposite Sakhalin. It has all the natural requisites for a first class port. Plans have been made to connect it with the Amur River (30 miles). This would at once increase its importance. Navigation in De Kastri Bay is open for 7—7½ months in the year. Ships with a draft of 30 feet can enter De Kastri, thus giving it certain advantages over Nikolaevsk.

Alexandrovsk

Because of the vast coal wealth of Sakhalin, Alexandrovsk is of importance for the Russian Far East. Arter the building of a necessary port, its significance undoubtedly will be tremendous as the coal deposits could thus be developed on a large scale.

St. Olga

St. Olga is located in the district of vast iron deposits, and after port facilities have been built it will occupt the place that belongs to this natural harbor. After the carrying out of

the project for connecting the Bay with Ussuri Railroad its significance will be much greater.

Bay of Posiet

The Bay of Posiet may be in the future of great importance, if the project of connecting the Chinese city Hunchun with the Bay by a railroad is affected. The railroad would give a good outlet to the rich Chinese grain region.

CHAPTER VI.

AGRICULTURE

From the fact that 65% of the total population of the Far Eastern Republic are peasants, it is clearly evident that agriculture occupies an important place in the economic life of the Republic. The peasants and the cossacks (who are also engaged in agriculture) emigrated from various parts of agricultural Russia. The Czar's Government brought the peasants here for the purpose of developing and populating the country, and the cossacks for the guarding of the eastern frontiers. The most populated regions of the Republic are the southern parts of the provinces, along the Amur River and its affluents, and the districts along the railroads. The nothern parts are sparsely populated, and consist of practivally virgin Taiga (forests), which contains innumerable wealth. In the Taiga regions the population is engaged to a great extent in hunting, and in the districts close to the Amur River, in fishing. In spite of the large percentage of peasant population and the collosal territory fit for cultivation, the republic has to import grain.

The cultivated area in the Republic is on the average 3,598,356 acres. This acreage is divided as follows:

Province	Acreage
Maritime—Priamur	893,028
Amur	1,485,177
Zabaikal	742,584
Pribaikal	477,567
Total	3,598,356

These figures indicate that only a small part of the territory is under cultivation. According to approximate figures the territory fit for culitvation is as follows:

Province	Acreage
Zabaikal	15,000,000
Amur	21,000,000
Maritime—Priamur	18,000,000
Total	54,000,000

Of course hopes for the cultivation of such vast area can be justified only with the solution of the problem of colonization of the Russian Far East and in the introduction of a sufficient quantity of modern agricultural implements.

The following are the graminous plants: wheat, oats, rye, buckwheat, barley. Plants of industrial value are flax and hemp.

The agricultural region is primarily in the Amur Province, and the cattle breeding in the Zabaikal Province. The population of the Amur Province may be classified as follows:

Classification	Percentage of Total Population of Province
Peasants	62
Cities and Towns of City Type	27
Mining Regions	11

The early emigrants among the peasants received 300 acres each. During later years they recived 45 acres, and later even less. The average holding per peasant in the Amur Province is 41 acres; in the Zabaikal Province 11 acres, and in the Maritime Province 15 acres. According to the figures of the so-called Amur Expedition, which explored the Amur Province in 1910, the number of peasant holdings engaged in agriculture was 21,074, with a cultivated area of 832,395 acres. According to statistics of 1917, the number of holdings increased to 36,280, giving a total area under cultivation of 1,486,177. By comparing these figures, it is evident that the number of peasant holdings for seven years increased to 14,280, i. e., almost 65%. The growth of the area under cultivation for the same period was 652,782 acres, or 78%.

In the Zabaikal Province in 1897, the area under cultivation was 873,621 acres, and in 1916, it was 1,323,679 acres, and the number of holdings increased from 79,420 to 125,931, i. e., during 19 years, the number of holdings increased only 29%,

and the cultivation area 34%. In the Maritime Province during the year 1909, there were cultivated 580,000 acres, and in 1916—859,536, acres, an increase of 48%.

The area under cultivation in 1918 in the Amur Province was 1,655,919 acres; in 1919, 1,490,331 acres. The figures of the local statistics give the following picture of the output of the grain products of this province (net crops, deducting grain for seeding purposes):

Year	Output in tons
1917.....	303,457 (according to the figures of the Ministry of Agriculture—340,450).
1918.....	475,088
1919.....	344,552

This means that the average production per person of the peasants population during the year 1916—1919 was 86 poods or 1 1-3 tons.

In the Zabaikal Province the net crop of grain per person of peasant population during the years 1915—1917 was as follows:

Year	Net Crop of Grain per Person in poods
1915.....	17.5
1916.....	25.0
1917.....	20.5

In the Maritime Province during the year 1915, the net crop was seven poods per person. The crops in the Amur Province per peasant exceed the crops of any of the Siberian provinces.

As to the quantity of land per peasant holding the Amur Province occupies the first place among all the Russian Provinces.

The quantity of the net crop per person shows that the crop at times far exceeds the requirements of the local population, and even years when the crops are poor give some surplus which may be exported outside of the province. According to local statistics the surplus for 1915—1919 was expressed in the following figures:

Year	Quantity, in tons
1915	206,982
1916	9,591
1917	58,269
1918	184,510
1919	53,974

The character of various cultures and the proportion of their area under cultivation in the individual provinces to the total area under cultivation is expressed in the following table.

	Percentage		
Product	*Amur Province*	*Zabaikal Province*	*Maritime Province*
	1917	1916	1916
Wheat	52.2	17.3	31.6
Oats	39.3	....	33.5
Oats and Barley	....	20.7	....
Rye	1.3	52.0	1.2
Buckwheat	1.1	6.5	15.4
Millet	9.6	0.2	...
Barley	0.3	....	0.9
Potatoes	1.4	0.9	6.3
Corn	....	....	2.8
Sunflower	0.6	....	....
Sunflower, hemp and poppies	....	0.1	....
Melons and cucumbers	0.2	....	....
Garden Vegetables, mellons and tobacco	....	0.7	....
Flax	0.2	....	5.0
Hemp	0.1	....	....
Seed grasses	....	1.6	....
Beans	....	....	2.9
Tobacco	....	....	0.4
Various	0.7	....	....
	100%	100%	100%

The production of wheat and oats occupies the most important place in the Amur Province; rye and then oats and wheat, in the Zabaikal Province; in the Maritime Province, wheat and oats are divided about equally, occupying each 1-3 of the cultivated area; the percentage of buckwheat is high, being 15.4%, and potatoes—6.3%, flax 5%.

AVERAGE CROPS IN THE AMUR PROVINCE ACCORDING TO THE FIGURES FOR 9 YEARS, 1911-1919, INCLUSIVE

(given in an area of one desiatine [about 3 acres] in poods)

1 pood=36.11 lbs.

Year	*Wheat*	*Oats*	*Rye*	*Barley*	*Millet*	*Buckwheat*	*Potatoes*
1911	70	73	49	83	57	28	534
1912	81	65	53	71	52	34	885
1913	70	73	66	63	62	47	411
1914	38	55	50	..	..	..	573
1915	64	66	72	45	51	42	543
1916	52	54	45	61	55	45	406
1917	45	55	61	54	37	41	450
1918	61	71	66	77	35	37	674
1919	49	56	49	77	61	49	...

The crops in the Maritime Province according to the figures of 1914 were as follows:

Product	Poods, per desiatine
Wheat	51.4
Rye	50.5
Oats	60.3
Barley	42.6

The average amount of seed planted per desiatine (about 3 acres) in the Amur and Maritime Provinces was as follows:

Seed	Poods, per desiatine	
	Amur	Maritime
Wheat	9.6	8.8
Oats	10.6	8.4
Rye	9.1	10.8
Barley	8.7	6.5
Millet	2.5	
Buckwheat	5.7	
Potatoes	68.8	

The great development of agriculture in the Amur Province, which has an abundance of tillable lands, the wealth of the rural population, and the relative proximity to the American market, with its highly developed production of argicultural machinery, resulted in a considerable utilization in the province of agricultural implements which have found wide application in this province. The number of agricultural im-

plements owned by the peasants, in the Amur Province can be seen from the census of machinery taken during the year 1917 (for the purpose of comparison the corresponding figures are given for two other provinces of the Far Eastern Republic, and two large Siberian provinces outside of the Far Eastern Republic—Irkutsk and Tobolsk.)

AVERAGE PER 100 PEASANT HOLDINGS

Name of Implement

	Plows									
	Single	*Multi*	*Drill*			*Thresh-*	*Winnow-*	*Wagons*		*Other Technical*
Province	*Share*	*Share*	*Plows*	*Mowers*	*Reapers*	*ers*	*ing Mach.*	*Iron*	*Wood*	*Implements*
Amur	83.3	0.1	16.0	14.3	36.7	7.7	19.6	33.6	131.7	3.4
Maritime	56.5	0.2	0.8	2.2	11.6	3.5	10.0	26.1	.....	2.8
Zabailkal	39.9	0.8	1.1	7.1	7.9	1.9	7.4	27.1	13.6	...
Irkutsk	24.8	2.1	0.4	2.5	1.6	3.8	10.6	5.1	107.0	2.7
Tobolsk	55.8	3.0	4.6	0.2	0.3	8.7	13.5	23.6	111.4	...

Thus in agricultural equipment also the Amur Province occupies a high place, exceeding in number of implements per holding both the neighboring provinces of the Far Eastern Republic, and the highly developed agricultural provinces of Western Siberia, such as Tobolsk.

The number of working horses per holding is as follows:

Province	No. of Horses per Holding
Amur.....	3.1
Maritime.....	1.4
Zabaikal.....	3.4

Thus in the number of working horses the agricultural Amur Province almost equals the cattle raising Zabaikal Province.

The soil and climatic conditions of the Maritime Province are very favorable for the raising of flax for seed and fibre. Unfortunately the conditions of life in this province since the war and intervention were unfavorable to aiding the population in the development of this branch of argiculture.

The cultivation of flax may become a very profitable item in the budget of the peasant, and in the north in the swampy

clayish regions the raising of flax for fibre may become the chief item for the support of the emigrant. Flax is also cultivated in the Amur Province, but in very small quantities. The amount of flax cultivated in the Maritime Province is as follows:

Year	Quantity, in tons
1910	1,298
1911	2,180
1912	2,938

Since that time the cultivation of flax increased, and in 1919, according to the figures of the Agronomic Department of the Centrosoyuz (Union of Cooperatives), the figures were 23,697 tons, of which 1,639 tons were kept for seeding purposes. In 1920, 50 tons of flax were exported to England, 6,708 tons were exported to America; 144 tons to Czecho-Slovakia; 54 tons to Germany; 3,673 tons to Japan; and, without specification of the country 3,353 tons. The total quantity of flax exported was 838,922 poods, or 13,982 tons. During nine months of 1921, January—September, the quantity of flax fibre exported to Japan was 835 long tons, and of flax seed exported to Japan, 4,821 long tons, and China 23 long tons, a total of 4,844 long tons.

Because of the lack of proper organization for the sale of flax, a great quantity of it perishes in the barns of the peasants. Local plants for compressing the oil are very few, and only a small part of the flax is utilized for the production of oil. The fibre is used very little, primarily for clothing. The greatest part of the fibre (80%—90%), because of lack of utilization, is thrown away. The cooperatives are taking some measures in regard to the utilization of the fibre, and its sale in the British market, which until the present time has not been done in the Russian Far East. It may give the country a new source of revenue, which may amount to more than 10 million gold rubles. The sale of flax fibre is assured, as the world market is experiencing a shortage of flax since the considerable decrease in the quantity of flax exported from Russia.

Hemp is produced in small quantities in the Maritime Province (up to 1000 tons) and in the Amur Province up to 500 tons. There was no demand yet for the eastern Siberian hemp, which is the reason for the insignificant cultivation of it.

As the results of the cultivation of tobacco were very satisfactory, in the near future it will undoubtedly become a large item of revenue. Experiments with beet sugar in the Amur and Maritime Provinces also proved very successful, and its cultivation will probably be developed.

In order to determine the consumption of grain and fodder in the Far Eastern Republic in connection with their production, it is necessary to consult the figures of the Ministry of Agriculture for the years 1911-1915, and separately for 1917. Since that time there were changes in the number of population and these changes will have to be takn into consideration when calculating the amount of grain that is being consumed. The increase in the population in the Russian Far East took place primarily in the cities and not in the rural communities. In calculating the consumption of grain, the following average figure is taken per person in a year in the city and in the village: 14 poods 20 lbs. of wheat; 35 lbs. of rye; 4lbs. of barley (or buckwheat); 11 poods 22 lbs. of potatoes (4 poods of potatoes=1 pood of bread); a total of 19 poods 14 lbs. or about 19½ poods of grain products per person. These figures have previously been used in statistical estimates in Russia.

From Table A, (see page 50) printed below, it is evident that for the entire population of Far Eastern Republic, it is necessary to have, in round figures:

	Quantity in poods	
Province	Grain Products	Potatoes
Zabaikal and Pribaikal....	13,897,000	10,372,000
Amur.....	6,190,000	4,620,000
Maritime and Priamur....	11,328,000	8,455,000
Total....	31,415,000	23,447,000

Table B (see page 51) shows the approximate amount of fodder necessary per year:

Province	Fodder in poods
Zabaikal and Pribaikal.....	36,000,000
Amur.....	5,300,000
Maritime and Priamur.....	6,000,000
Total.....	47,300,000

Table C (see page 51) shows what the Provinces of the Far Eastern Republic produced during the year of 1917.

Province	Grain Products	Fodder	Potatoes
	P O O D S		
Zabaikal and Pribaikal	17,674,000	8,591,000	2,520,000
Amur	9,760,000	10,667,000	3,000,000
Maritime and Priamur..	6,524,000	7,120,000	7,715,000
Total.....	33,958,000	26,378,000	13,235,000

In other words, according to the figures of 1917 (see Table D, page 51) the Provinces of the Far Eastern Republic produced 2½ million poods of grain beyond the requirements of the population, but were short 21 million poods of fodder, and over ten million poods of potatoes.

According to the average figures for 1911-1915, (Table E page 52) the following is the situation showing the production in the Provinces.

Province	Grain Products	Fodder	Potatoes
	P O O D S		
Zabaikal and Pribaikal	13,567,000	3,976,000	1,680,000
Amur.....	6,809,000	6,339,000	2,975,000
Maritime and Priamur..	3,216,000	3,678,000	6,366,000
Total.....	23,592,000	13,993,000	11,121,000

Taking into consideration the reqquirements of the population as shown above, the results are as follows: the population of the provinces was short:—grain products about 8 million poods; fodder over 23 million poods, and potatoes over 12 million poods.

If the Provinces are considered separately the following is the situation:

1. According to the figures of 1917 the Zabaikal Province, together with the Pribaikal Province (in former years these two provinces were one), had a surplus of grain products of over 3½ million poods. It was short over 27 million poods of fodder, and nearly 8 million poods of potatoes.

According to the figures of 1911-1915, there was a shortage of grain products annually of over 300,000 poods, of fodder over 32 million poods, and of potatoes over 8 million poods. Thus it is evident that the Zabaikal region did not produce a sufficiency of potatoes and fodder while of grain products there was sometimes a surplus which to a certain degree covered the shortage of fodder and of potatoes. The state of affairs in the

Zabaikal region in general is such that from two to three million poods of grain have to be imported. This is explained by the fact that the neighboring Irkutsk Province does not produce a sufficient quantity of grain and has to buy from its neighbor up to one-half million poods. Also, the consumption is somewhat greater than the average, and that explains the necessity of importing such a quantity of grain (from 30,000-50,000 tons).

2. According to the figures of 1917, the Amur Province had a surplus of grain products of over 3½ million poods, a surplus of fodder of over 5 million poods, and a shortage of potatoes of over 1½ million poods. According to the figures of 1911-1915, issued by the Ministry of Agriculture, the surplus of grain products was 600,000 poods, of fodder over 1,000,000 poods, and a shortage of potatoes of over 1½ million poods. These figures for the Amur Province are undoubtedly not exact, as local statistics show a greater surplus of grain products. The figures for the crops of 1918 (28,505,235 poods) shows a surplus of over 8 million poods, over the crops for 1917. Compared with the figures of the Ministry of Agriculture, the 1918 crop was 15,000,000 poods greater than the average crop for the years 1911-1915. It is clear that the Amur Province is not only self-sufficient, but even with an unsatisfactory crop it produces a surplus. Part of the grain is shipped to the other side of the Amur River for the Chinese, and part is exported to other provinces, if the population of these provinces has the purchasing equivalent. Otherwise the grain accumulates in the barns of the peasants. The consumption of grain in the Amur Province is greater than in the other provinces. It may be stated with certainty that the Amur Province could always export up to 3,000,000 poods of grain.

3. According to the figures of 1917 the Maritime Province was short of nearly 5,000,000 poods of grain products, and had a surplus of over 1,000,000 poods of fodder, and a shortage of 700,000 poods of potatoes. According to the figures of 1911-1915 the shortage of grain products was 8,000,000 poods, of fodder over 2,000,000 poods, and of potatoes over 2,000,000 poods. Thus the Maritime Province had to import from 4,000,000 to 8,000,000 poods. The shortage of individual

years is partly covered by the surplus of fodder which equals from 1,000,000 to 2,000,000 poods. The Maritime Provincial Zemstvo estimated that the shortage of wheat for the rural population of the province for 1919 was 1,800,000 poods. Together with the city population it can be considered from 4,000,000 to 4,500,000 poods. Grain products used to be exported from the Maritime Province to Kamchatka and somewhat to the Kolym region (of the Yakutsk Province). Because of this it was necessary to import another 500,000 poods of grain. On the average it may be considered that the Maritime Province has to import from 5,000,000 to 6,000,000 poods of grain.

Adding to these figures the imporation of the Zabaikal and Pribaikal provinces of 2,000,000 to 3,000,000 poods, there is the necessity of importing from 7,000,000 to 9,000,000 poods of grain. Part of these requirements could be, and are, covered by the surplus of the Amur Province. On the average it may be necessary to import from Manchuria from 5,000,000 to 7,000,000 poods, i. e., 80,000 to 120,000 tons, of grain products annually. Thus the Far Eastern Republic is confronted by the problem, not only of increasing the area of cultivation, but also of introducing agricultural machinery in the Zabaikal, Pribaikal and Maritime Provinces, so that the standard of their production would at least equal that of the Amur Province. This undoubtedly would at once end the necessity of importing grain from Manchuria, for covering the shortage not speaking of the possibility of exporting the surplus.

TABLE A

Population and Consumption of Grain Products
(annual requirements according to statistical estimates)

Province	*Rural & Urban Population*	*Rye*	*Wheat*	*Barley*	*Potatoes*
Zabaikal and Pribaikal	898,000	785,750	13,021,000	89,800	10,371,900
Amur	400,000	350,000	5,800,000	40,000	4,620,000
Maritime and Priamur	732,000	640,500	10,614,000	73,200	8,454,600
TOTAL ..	2,030,000	1,776,250	29,435,000	193,000	23,446,500

Remark: The average requirements per person per year are: wheat—14 poods 20 lbs.; barley—4 lbs.; rye—35 lbs.; potatoes—11 poods 22lbs. (equal to 4 poods of grain); total requirements per person per year—19.5 poods of grain.

TABLE B

Quantity of Cattle and Consumption of Food by Them
(according to Agricultural Census of 1916)
(in thousands of heads and poods)

Province	Horses Work Age		Rest Large Animals		Medium—Small Animals		Total Req. feed cattle in villages	Total incl Req. for horses in cities
	Thous. heads	Quant. feed poods	Thous. heads	Quant. feed poods	Thous. heads	Quant. feed poods	poods	poods
Zabaikal and Pribaikal	610	12,200	1,400	14,000	1,910	9,550	33,750	36,000
Amur	147	2,940	137	1,370	164	820	5,130	5,300
Maritime and Priamur	122	2,440	213	2,130	210	1,050	5,620	6,000
TOTAL	879		1,750		2,284			47,300

Remark: In this table the average requirement is based on the following: working horse requires 20 poods; other large animals 10 poods; medium and small animals 5 poods of fodder.

TABLE C

Average Crop of the Principal Grain Products and Potatoes
(In thousands of poods)

	Total Grain Prod.							Total Fodder		Potatoes	
	Rye	Wheat	Buck-Wheat		Aver. 1911-1915	Oats	Barley		Aver. 1911-1915		Aver. 1911-1915
	1917	1917	1917	1917		1917	1917	1917		1917	
Zabaikal with Pribaikal	11236	4484	2054	17674	13567	7026	1565	8591	3976	2520	1680
Amur	554	8959	147	9760	6809	10600	64	10667	6339	3000	2975
Maritime with Priamur	184	3431	2909	6524	3216	7120	....	7120	3678	7715	6366

TABLE D

Surplus and Shortage
(according to the figures of the Ministry of Agriculture for 1911)
(in thousands of poods)

Province	Products	Net Crop 1917	Consumption Requirements	Surplus	Shortage
Zabaikal and Pribaikal	Grain	17,674	13,897	3,777	
	Fodder	8,591	36,000		27,409
	Potatoes	2,520	10,372		7,852
Amur.....	Grain	9,760	6,190	3,570	
	Fodder	10,667	5,300	5,367	
	Potatoes	3,000	4,620		1,620
Maritime and Priamur.	Grain	6,524	11,328		4,804
	Fodder	7,120	6,000	1,120	
	Potatoes	7,715	8,455		740

TABLE E

Surplus and Shortage

(according to figures of Ministry of Agriculture for 1911-1915)

(in thousands of poods)

Province	*Products*	*Net Crop 1911-1915*	*Consumption Requirements*	*Surplus*	*Shortage*
Zabaikal and Pribaikal	Grain Prod.	13,567	13,897		330
	Fodder	3,976	36,000		32,024
	Potatoes	1,680	10,372		8,692
Amur.....	Grain Prod.	6,809	6,190	619	
	Fodder	6,339	5,300	1,039	
	Potatoes	2,975	4,620		1,645
Maritime and Priamur.	Grain Prod.	3,216	11,328		8,112
	Fodder	3,678	6,000		2,322
	Potatoes	6,366	8,455		2,089

CHAPTER VII.

APICULTURE.

In the Maritime Province apiculture is gradually beginning to prove a source of income to the farmer, and peasants are beginning to give serious attention to it. During the yar 1912, 42,858 poods of honey were produced, and 21,670 poods of honey were sold, value of which amounted to 130,020 gold rubles. The wax produced was 4,301 poods, of which 2,351 poods were sold, the value being 42,318 gold rubles. Since that time the production increased up to 70,000 or 80,000 poods. Chemical analysis of Ussuri honey showed that it is one of the best in the world. In 1914, the number of bee hives was 200,000. The average number of bee hives is from 150,000 to 225,000.

CHAPTER VIII.

CATTLE BREEDING.

Cattle breeding in the Far Eastern Republic occupies a very important place in the economic life of the country. It gives an opportunity to export hides, wool, fats, bristle, hair, casings. The Zabaikal and Pribaikal Provinces, which are neighboring with the cattle breeding Mongolia, are considered the principle cattle breeding provinces. In the Amur and Maritime Provinces the number of cattle is increasing, but it is far behind the number of cattle in the Zabaikal region. The following table gives the census of cattle in the various provinces of the Republic in 1916.

TABLE I.

Kind of Animal	Zabaikal and Pribaikal	Amur	Maritime and Priamur
Horse	606,162	146,862	121,695
Horned Animals..	1,392,331	136,798	212,338
Sheep	1,314,684	22,917	4,101
Goats	249,772	514	3,465
Pigs	334,882	140,051	145,466
Varia	9,979	9	4,957
Total....	3,907,800	447,151	492,022

Thus, according to the census of 1916, the total number of cattle in the Republic was 4,846,973. Adding to it the calves, and city horses, the number will exceed by far 5,000,000.

The number of cattle per peasant holding, and the quantity of hay consumed, is evident from the following table:

TABLE 2

Province	Classification of Animals: Working Horse	Sheep: Cows & Goats	Sheep: Pigs	Total	Acres Cultivated for Hay	% Hay fields compared with total cultivated area
	No. Per Peasant Holding				Per Peasant Holding	
Zabaikal and Pribaikal .	3.4	3.8	11.5	2.4	28.7	19.8	192.3
Amur	3.1	1.4	0.7	3.4	11.8	11.1	27.3
Maritime and Priamur ..	1.4	1.2	0.2	3.4	8.8	2.7	54.4

From this table it is evident that the Zabaikal Province occupies the first place in the number of cattle, the Amur Province the second place, and the Maritime Province the last. As compared with the Siberian Provinces outside of the Far Eastern Republic, in cattle breeding the Zabaikal Province is second only to Semipalatinsk Province, where per each holding the average number of animals is 31.9. In the number of working horses the Amur Province is very close to the Zabaikal, which is explained by the fact that the Amur Province as a producer of grain products requires the greatest number of working horses. The relation of areas under hay cultivation and the total cultivated area also clearly demonstrates the character of the various provinces of the Far Eastern Republic in regard to cattle breeding.

Cattle breeding as part of the agricultural industry is constantly growing in the Amur Province as well as in the Maritime Province, in quantity as well as in quality. As compared with 1910, the number of cattle in the Amur Province in 1917 increased by 45%. The sheep breeding is developed only in the Zabaikal Province. The sheep are mostly of Mongolian extraction, more rarely of Manchurian. There are also sheep of breed mixed with merino. Of farm horses, the Amur horse is of a very good quality and large size. The Amur Molokans (a religious sect which emigrated from southeastern Russia where good breeds of horses are raised) are responsible for the good breed of the Amur horse. In the Amur Province there are known to be 200 thorough-bred stallions and 500 mares which greatly facilitated the improving of the breed of local

horse. Milch cows of the Republic are mostly of local breeds; of Manchurian and Mongolian, and in the southern part of the Maritime region, the Korean breed. The cows of these breeds give little milk. There are cows of cultured breeds: Simental, Holland and others. The frosts are very bad for the good breeding of cows. The best cows are those brought from western Siberia, primarily from Tomsk. They do not require special care, give a sufficient quantity of milk, especially if properly cared for. The pigs are principally of Manchurian breed, although there are some of the mixture of cultured breeds, such as Yorkshire and Berkshire. This breed produces very good results; a four month old pig of mixed breed is equal in weight to a year old pig of local breed.

Deer breeding can become a very profitable source of income in the agricultural life of the Amur and Maritime Provinces because of the demand for the horns of deer while in velvet (used in medicine). In the Maritime Province this branch of animal breeding is already being developed by some people. The price of a pair of deer horns (including the forehead) is from 100 to 800 gold rubles. The meat of deer is also used for food.

.. Until the present time the Russian Far East did not completely meet its requirements of meat, which are about 35,000 tons. The shortage was supplied from Mongolia. To the Amur gold mines cattle and meat were shipped across Manchurian cities Aigun, Sakhalyan (which is located on the Chinese side of the Amur River opposite Bla.goveshchensk), and floated on the river Sungari. To the Maritime Province meat and cattle were shipped across Manchuria and partially through the port of Vladivostok from Chinese ports. It was also shipped through the city of Hunchun which is close to the frontier, and where there is a special Russian plague quarantine station for animals.

The Zabaikal Province can produce 120,000 poods and more, of sheep wool for export, but this amount cannot be taken as an average, as it depends on conditions. This is evident by comparing the figures of exports of wool for 1919 and 1920. According to the figures of the railroad freight during the year 1919 from the Zabaikal Railroad to the Ussuri Rail-

road there were carried to Vladivostok for export 112,402 poods of sheep wool and 11,029 poods of camel wool.

During 1920, the year of disorders in the Zabaikal Region because of the athrocities of Semonoff and the Japanese, the situation is altogether different.

WOOL EXPORTED THROUGH VLADIVOSTOK IN 1920.

Kinds of Wool	Exp. to Japan	Exp. to U. S.	Total
		Poods	
Camel Wool	800		800
Sheep Wool	20	66	86
Goat Wool	10	—	10
Mongolian Wool	35	270	305
Lamb Wool	—	800	800
Total to other countries..	—	—	1,161
Total.....	865	1,136	3,162

The same situation may be observed in regard to hides and horse hair and bristle. While in the pre-war years over 150,000 poods of hides were exported, during the latter years the quantity was greatly reduced.

During the year 1920 the following quantity of bristle was exported:

Kind of Bristle	Exp. to Japan	Exp. to U. S.	Total to Other Countries
		Poods	
Bristle, Unsorted	462	—	462
Bristle, Raw	77	25	102
Bristle, Uncleaned ...	980	—	980
Bristle, all sorts.....	2,775	166	2,941
Unsorted, exported generally abroad ...	—	—	13
Uncleaned, exported generally abroad ...	—	—	108
All kinds, exported abroad	—	—	846
Total.....	4,294	294	5,555

The year 1920 was a very difficult year for the Russian Far East. The various provinces were separated from each

other, and Vladivostok was cut off from the producing regions. In connection with this all production in the producing regions was greatly diminished. Business was also very poor during the first nine months of 1921, January to September, and through Vladivostok there was exported only 100 long tons of wool. The improvement in the exports through Vladivostok may be expected only with the departure of the Japanese troops, when the population will feel secure from one day to the next.

CHAPTER IX.

INDUSTRIES OF THE FAR EASTERN REPUUBLIC.

The vast area of the Republic which is fit for agriculture and cattle breeding, the wide forest areas, the colossal mineral wealth, and the inexhaustible fishing resources in themselves presuppose the future of the Republic, at least in the nearest future, as a country primarily of the basic industry type rather than of the manufacturing industry type.

The utilization of 3,500,000 acres of land out of the 54,000,000 acres fit for cultivation on the one hand, and the shortage of grain products on the other, make it imperative to increase the area of cultivation. The existence of the neighboring vast Manchurian grain market limits the development of the area of cultivation of grain products to the requirements of the Republic. This neighboring market makes the farmer interested in the production of technical plants, such as flax, hemp, and tobacco. This is also facilitated by the already achieved success and the favorable soil and climatic conditions. This is particularly true as regards flax. This increase in the cultivation of flax puts forward the issue of the vegetable oil industry which at the present time is in its infant stages in the Republic. The considerable size of the cattle breeding industry will make it possible in the near future to develop the preparation of animal products to a considerable extent. This development is already taking place in the Zabaikal region, in the Amur Provinces, and in the Maritime Province, but did not attain the size possible in proportion to the existing resources. This is true in regard to the leather, wool and soap making industries. The forest area, which is over 300,000,000 acres, is abundant with first class pine, spruce, larch, cedar, oak, etc., and opens wide possibilities for the timber industry, for paper, match and oil industries. The latter industry (preparation of cedar nut oil)

up to the present time was developed on a very small scale. The export of timber did not exceed a few million gold rubles annually, while the resources are such that, if properly developed, the revenue for the government treasury can nearly cover the annual budget of the country. The mineral wealth makes it possible to develop industries such as the gold industry, which, since the time of the revolution, has fallen off considerably; the presence of vast resources assures a great future to this industry. The same thing may be said in regard to the iron and silver-lead industries. There is only one iron manufacturing plant, the Petrovsk works, the capacity of which is 4,000 tons of iron and iron products, while the requirements of the republic are 70,000 tons annually. The presence of the market on one hand and the resources (ores) on the other, create a basis for the development of the iron industry. This will be facilitated by the tremendous requirements of the neighboring market of the rest of Siberia. Regarding the existing lead-silver industry, it may be stated that it is very small if the 500 known deposits are taken into consideration. The coal industry, for which resources of coal are known to be about 40,000,000,000 poods (not including Sakhalin), prior to the war produced about 65,000,000 poods annually, and now produces about 50,000,000 poods. This also cannot be considered as a satisfactory stage of development. The production during the period between 1905-1919 of 8,580 poods of tungsten with the known large deposits indicates the infant stage of the development of this mining industry. At the present time even this small mining of tungsten has practically ceased. The exploitation of the vast resources of Sakhalin oil did not even begin.

This remarkable contrast between the mining industry and its possibilities has its justification: the absence of capital and technical equipment and the shortage of technical personnel. If to this should be added the unfavorable conditions created by armed intervention, then the picture is clear. The vast resources of fish in the waters of the Republic make possible not only the suplying of the population, but also the exportation of over 100,000 tons annually. The canning industry which was just beginning to develop was destroyed by Japanese aggression, and will undoubtedly become one of the important

industries of the Republic after the departure of the Japanese from the coastal territory of the Far Eastern Republic.

Thus from this brief sketch it is evident that speaking of the industries of the Far Eastern Republic it is necessary to speak not so much of the present, when the industries are practically in their embryonic stages, but of the future, and of the resources and possibilities that would follow the application of sufficient capital.

THE ZABAIKAL AND PRIBAIKAL PROVINCES.

Comparing the figures printed below for the years 1898-1910, which give the number of going enterprises, it is evident that the industry of this province (including the Pribaikal Province) was begining to develop and grow.

Industry	No. of Enterprises	
	1898	1910
Manufacturing from Vegetable Products	36	187
Manufacturing from Animal Products...	85	96

Since that time up to 1916, although the development was slower, it was steadily increasing, especially during the war, but since 1916, and espevially since 1917, the first year of the revolution, the number of industries declined.

The causes of the retarded development from 1910 to 1916 are as follows:

1. Lack of technisal equipment for the industrial enterprises.

1. Lack of technical equipment for the industrial enter-

3. Lack of free capital among the local population which could place enterprises in their proper standing so as to be able to compete with the Russian products which were being brought into the Far East at that time.

According to the figures of freight carried on the Zabaikal Railroad in 1912 the exportation of raw hides from the province was 153,898 poods; of raw furs, 75,558 poods, and this was the situation when there were 40 tanneries in the province (it is true that the majority of these lacked mechanical equipment).

From the figures of freight carried on the Zabaikal Railroad it is evident that during the same year 304,735 poods of

machinery were brought into the province, of which 219,876 poods were agricultural machines, and the rest machinery for manufacturing purposes, and in this must be included those for the gold mining industry and the coal mining industry. Thus machinery imported for actual manufacturing purposes was only a small part of the total imports of machinery.

From the beginning of the World War, when the importation of manufactured products from Russia decreased, the manufacturing industry improved somewhat in the province, particularly the industry engaged in the development of animal products, for which raw materials (hides, fats, wool) were present in large quantities, there also being a permanent supply of raw materials from Mongolia. Tanning materials for the tanneries (oak and willow bark) were to be had in abundance, and there was always plenty of local soda for soap manufacturing. Although due to the abundance of animal products the industry ought to develop and, apparently, should surpass any other industry in the country, in reality its total production is considerably less than the industry engaged in the development of vegetable products. The cause of this, as was already stated, is that the majority of the factories and shops lacked mechanical equipment. This applies to the tanneries, soap making, candle making, and wool manufacturing plants. The number of the more or less large factories in the province may be seen from the folowing table in the districts Zabaikal, Pribaikal, and Sretensk-Nerchinsk, which belong to the Provinces Zabaikal and Pribaikal:

	Pribaikal District		*Zabaikal District*		*Sretensk-Nerchinsk District*	
Name of Industry	*No. of Plants*	*Annual Production*	*No. of Plants*	*Annual Production*	*No. of Plants*	*Annual Production*
Hide tanneries ..	10	96,000 hides	5	30,000 hides	3	30,000 hides
Soap Making Factories	7	140,000 poods	2	180,000 poods	5	72,000 poods
Sheep skin tanneries	5	48,000 skins	7	100,000 skins	3	30,000 skins
felt boots factories....		15,000 pair				
Candle making factories.....			1	10,000 poods	2	18,000 poods

Thus there were 18 more or less large tanneries in the Zabaikal and Pribaikal Provinces whose annual production was 156,000 hides. There were 14 soap making factories with an

annual production of 392,000 poods; 15 sheep skin tanneries and felt "boot" factories with an annual production of 178,000 skins and 15,000 pairs of felt boots; 3 candle making plants with an annual production of 28,000 poods.

Besides these there were in the provinces 25 small tanneries (without mechanical equipment), which did not work during the years 1919-1920, and only recently did they gradually begin to revive.

The branch of industry engaging in the development of vegetable products, in the number of plants and in the quantity of production stands higher than the industry developing animal products. This development is conected with the development of agriculture in this cattle breeding province.

Besides the flour mills there are distilleries and breweries well equipped technically, which sold their products outside of the province, vegetable oil plants, etc. The number of these plants and their productivity can be seen from the following table:

	Pribaikal District			Zabaikal District			Sretensk-Nerchinsk District		
Name of	Plants	Workers		Plants	Workers		Plants	Workers	
Industry	No. of	No. of	Productivity	No. of	No.of	Productivity	No. of	No. of	Productivity
Distilleries	1	80	75,000 gal.	1	40	35,000 gal.	1	40	37,000 gal.
Breweries	3	55	130,000 gal.	3	40	265,000 gal.	5	70	350,000 gal.
Flour Mills	458	472	2,000 tons	7	115	1,500 tons	13	40	1,200 tons
Oil Refineries	2	4	200 tons	.	...	....	..	..	....
Saw Mills	6 saw mills in the Province, with a production of 400,000 logs.								

From this table it is evident from the number of workers employed that the majority of the enterprises were small factories.

The majority of the flour mills are either wind mills or water mills, which employed only one worker. The number of creameries is extremely small in spite of the large cattle breeding in the province.

Refineries obtaining oil from cedar nuts would be of tremendous importance in the Zabaikal and Pribaikal region. The Pribaikal region has vast resources of cedar forests covering enormous areas of the basins of Rivers Chikoy and Selenga. The local peasants distill oil and obtain from the remnants, cakes by

hand process. In the village Krasny-Yar it is intended to put into operation soon an oil refinery with a capacity of 40,000 poods of oil and 120,000 poods of cakes annually.

Of great importance not only for the Zabaikal region but for the industry of the Far Eastern Republic would be the establishment of factories for the preparation of tanning extracts so essential for tanneries. In the district of Verkhneudinsk and Troitskosavsk counties there are tremendous quantities of willow, oak and so-called "bodan", and it would be very simple to obtain tanning extracts from their bark with the aid of alkalies. It is only necessary to have kettles for boiling, filters and dryers. Such experiments were made in the laboratories of the Verkhneudinsk Regional Self-Government, and they gave very positive results. The requirements of tanning extracts for the tanneries of the Zabaikal Province alone is not less than 25,000 poods annually. Until now the tanning extracts were received only from abroad.

The development of mineral resources in the Zabaikal Province is in the embryonic state in spite of the fact that the province is prosperous with the richest deposits of ores, strata (lime, clay, etc.) soda, salt, and saline lakes. There are the richest deposits of lime in the region of Station Zaigraevo on the Zabaikal Railroad, 1), near verst 508, 2) seven miles from the above mentioned station. The lime deposits were investigated thoroughly and are of the best quality, almost without any mixture of silica, and its deposits amounted to tens of millions of poods. These deposits are within 8 and 20 miles south of Station Zaigraevo. They have not been explored, but are used by the peasants who derive good earnings from them.

In the same district there are deposits of clay although not fire-proof, but its contents are fit for the production of cement. The Bryansk cement factory which was built 25 years ago, near Station Zaigraevo, has been worked up to 1914, producing for the market (primarily for the Zabaikal Railroad) 150,000 barrels of cement annually. The owners of the factory intended to increase the capacity of the factory up to 300,000 barrels, in order to do which a power plant was imported, and set up, with a steam turbine for 600 kilowatts. It was intended to move the plant to Junction 37 of the Zabaikal Railroad where

the Tarbogatai mines are located. Here the frame of the factory had been built, the power plant moved, the pipe furnace put up, and most of the machinery shipped from the old plant. But the war, and later the revolution and intervention, stopped the further moving of the plant, so important to the Province and the entire Republic. The question of finishing the moving of the plant and putting it into operation is under consideration by the local government at the present time. The wealth of the Zabaikal Province in saline and soda lakes makes it possible to develop highly the production of sulphate and also ren-- ders possible the development of the glass industry. Twenty-three miles from the city of Bargusin there is the Algin Sulphate factory which can produce up to 100,000 poods of saline and which can be worked to yield 30,000 poods of sulphate. At the present time, because the owner lacks capital, the work in the factory is gradually decreasing. This plant furnishes saline and sulphate to the Verkhneudinsk glass factory.

About 4 miles from Station Dauria on the Zabaikal Railroad on Lake Shekolan, there is working another sulphate factory obtaining crystallized saline from the lake. Its production was annually up to 10,000 poods of pure dry sulphate.

In the Zabaikal region there are many other saline lakes which have been explored geologically. Such lakes are: the Kazhar-Shan, Tsinganar, Belentuy, Hangai, Emikoy, and also others, that are still to be explored. The glass factory in operation in Verkhneudinsk yields the following annual production: window glass, 14,000 cases; bottles, up to 500,000; tumblers, up to 600,000; lamp globes, up to 200,000; and pharmaceutical utensils up to 1,000,000 pieces.

The demands for glass in the Zabaikal and Amur Province where there is no production of glass at all, is extreme, and the Verkhneudinsk factory cannot satisfy the demand, just as the demand for glass cannot be satisfied by the single glass factory in the Maritime Province. It is necessary to utilize the saline lakes for obtaining the raw materials, and developing the glass industry in the Republic (quartz, lime, and clay necessary for the production may be found on the spot in various localities in any quantity).

There are great possibilities in the Zabaikal Province, be-

sides the production of sulphate, in obtaining and in the production of soda, crystallized as well as caustic, and calcined.

Of the soda lakes the best known and worthy of attention is the Doronensk lake, which is located 80 miles to the south of Chita and which has an abundance of larch and pine forests four miles from the River Ingoda, which can be used for floating purposes. Judging by the content of soda in brine, from 8% to 10%, and also from the content of raw soda (according to the calculations in 1912 by Chemist Belousov this supply is 24,000,000 poods), it is undoubtedly of great industrial importance. In the winter time when the temperature of the water is lowered, the soda in crystal form drops to the bottom of the lake from where it may be obtained by most elementary methods as a pure product.

As soon as the lake is covered by ice there appears on the ice the same crystallized soda, the layer of which is sometimes 1¾ inches thick. What quantity can be obtained by the simple process of sweeping off the soda can be imagined when the fact is taken into consideration that the area of the lake is 4 square kilometers. In 1920 the lake was investigated by an English company, which intended to obtain 100,000 poods of crystallic soda annually, 60,000 poods of calcined soda, 20,000 poods of caustic soda, and up to 200,000 poods of cooking salt. But the war prevented the realization of this plan. The Doronensk Lake belongs to one of those gems of nature which are scattered throughout the Russian Far East, and which await only the application of capital. Considering the fact that there are over 100 carbonic springs in the Zabaikal region, it may be expected that there are other such lakes there. No investigation has been made in that line as yet.

The Kiron cooking salt plant deserves attention. It was built on the lake of the same name, and is 20 miles from Kyakhta, and 3 miles from Mongolian frontier, and 1¼ miles from the river Chikoy which can be used for floating purposes. In 1885 a salt boiling plant was built on the lake, and in 1895 it produced 31,000 poods of salt, which is the maximum of its capacity. Since 1887, besides salt, there were also produced as by-products bitter salts, and they were reproduced into caustic soda. This salt plant is still being worked by primitive methods.fl The brine is prepared during the warm part of the year,

i. e., it is pumped into a basin where by freezing in winter time it is separated from the bitter salts, and it is placed in boilers. The salt obtained contains 99.07% of sodium chloride. The Borzin salt lake is in the Aksha county not far from Station Borzya. During the summer, when the water is evaporating, the cooking salt precipitates. The lake has been little investigated, and it is difficult to say regarding the quantity of salt in it. At the present time local peasants obtain salt from it by hand methods.

THE AMUR PROVINCE.

The industry which handles animal products in the Amur Province is little developed, as well as all of the manufacturing industries of that province. It is much below the basic industries.

Of industries engaged in developing animal products in the Amur Province there are tanneries, soap making, candle making, and felt making. The plants are very small and the majority of them need mechanical equipment. The number and productivity of plants can be seen from the following table:

Name of Industry	No. of Plants	Annual Production
Tanneries	23	60,000 pieces
Soap Making ...	5	24,000 poods
Candle Making..	1	2,500 poods
Felt Making	18	15,000 pair felt boots
		15,000 yards of felt
Sheep coat making	7	5,000 sheep skins
		1,500 sheepskin coats

The utilization of the vast fishing wealth of the Amur River, in the fish canning industry, is only beginning. Among the manufacturing industries the first place belongs to those developing vegetable products. Due to the great production of grain, the numerous water power mills and wind mills do not satisfy the requirements of the district. There is a necessity for large steam flour mills. Most of the existing steam flour mills are located in the city of Blagoveshchensk, where even grain from Manchuria is milled. But the flour produced by these mills cannot compete with the flour imported from abroadfl from Manchuria and America. Thus further develop-

ment of the general flour milling industry of the country is possible only with additional technical equipment and capital.

Distilling of spirits and brewing was developed in this province to an insufficient degree. In the Amur Province there were two distilleries and four breweries.

During the latter years the manufacturers planned to build sugar refineries and for this purpose experiments were made of planting sugar beets, which gave very satisfactory results. The following table shows the production of enterprises engaged in the development of vegetable products.

Name of Enterprise	No. of Enterprises	No. of Workers	Productivity
Steam Flour Mills...	9	597	up to 10,000,000 poods
Spirit Distilleries....	2	105	up to 1,000,000 gold rubls
Breweries	4	200	up to 700,000 gold rubls
Oil Refineries	2	—	up to 60,000 poods

In spite of the vast forest resources, the timber industry is not developed, and produced only for local requirements. The work of the saw mills and lumber mills was confined to the cutting of timber, manufactnring of boards and beams, sleepers, and only partially staves for barrels and the manufacturing of the latter. There are no furniture factories in the province.

The match industry was limited to one factory in the city of Blagoveshchensk where about 21,000 cases of matches were produced monthly. The Blagoveshchensk matches were used in the Zabaikal region also, but naturally there was not enough of them and a great quantity of matches was imported from Manchuria and Japan.

The production of chemicals from wood, was in an infant stage, and there were a few small plants for dry distillation and for the production of turpentine. These plants had no mechanical equipment. There are no paper or cellulois plants. Only by an influx of capital and the application of mechanical methods can this industry be developed.

The following table shows the productivity of the plants engaged in manufacturing wood products in the Amur Province.

Name of Industry	No. of Enterprises	No. of Workers	Annual Production
Saw Mills	11	206	500,000 logs
Match Factories ..	1	66	21,000 cases
Plants for dry wood distillation	No information		130,000 poods of tar 50,000 poods turpentine

The industry engaged in developing mineral products is also in its primitive stage, in the Amur Province, in spite of the very large valuable mineral ore deposits. The cause was the absence of mechanical equipment and therefore the inability to compete with Russian and Japanese products.

This was the condition of the only glass making factory in the province which obtained its raw materials on the spot, (saline, lime, quartz).

According to the statistics, the value of imported glass products in the province from Japan and European Russia in 1906, was 3,000,000 gold rubles. In many places there were tremendous deposits of fire-proof clay which is well suited for the production of china and deposits of lime which, together with the clay, and, considering the presence of mineral coal in the province, would make it profitable to build cement factories in the province.

The manufacture of metals and machine production are also of great importance to the country in view of the considreable use of agricultural machinery and the development of river shipping.

.. In Blagoveshchensk in 1906 there were five mechanical plants engaged in the production of pig iron (at the present time the work there has almost ceased). In spite of this the importation from abroad (particularly from America) of machines and metal products during the same year, 1906, was 2,098,000 poods, and their value was almost 17,000,000 gold rubles. In 1907 the imports amounted to 12,348,000 gold rubles, (according to statistics the average value of imported metal products per person in the total population of the province was 30 gold rubles).

The following is a table of industries engaged in the production of articles from the mineral resources of the provinces.

Name of Industry	No. of Enterprises	No. of Workers	Productivity
Glass Manufacturing..	1	30	20,000 poods glass prod.
Pig Iron and Machine Construction	5	306	826,000 gold rubles am't of production
Brick Manufacturing..	47	167	63,000 gold rubles am't of production

THE MARITIME AND PRIAMUR PROVINCES.

The Maritime and Priamur Provinces are extremely rich in fish, forests, fur animals, coal, iron, and silver-lead. The Maritime Province is bounded by the ocean on one side, has a navigable river, Ussuri, which is a tributary of the Amur; the city of Vladivostok, the gem of the Far East, is in the Maritime Province. Through Vladivostok the Maritime Province is connected by means of the Ussuri Railroad, with the Chinese Eastern Railroad and the Amur Railroad. Thus there were present all the requisites for turning the Maritime Province, and particularly its southern part, into an industrial center. The development in that direction gradually began, but for general reasons which retarted the development of industry in the Russian Far East, this development in the Maritime Province was retarded as well. The timber industry in the Maritime Province was more developed than in the other Provinces. Its turnover during the year 1913 reached 3½ million gold rubles. At one time there were in operation in the Maritime Province 44 saw mills, with a capacity of 2,000,000 logs. There was also a furniture factory, box factory, and veneer factory, a match factory, a ship building plant, and a railway car assembling plant. The production of tar and turpentine reached considerable size. In spite of the abundance of flax, oil refining was only in embryonic stage, and there is no doubt that in the future it will develop into a large industry. The same is true of the tobacco industry. The steam flour mills of Vladivostok produced large quantities of flour and in the near future there will begin to be operated a new large flour mill for the milling of Manchurian wheat for export. The development of animal products, local as well as of other provinces, and partially of Mongolia, is beginning to develop and promises to increase in

the future. A new tanning plant with a capacity of 2,500 hides monthly, recently began operations. Of enterprises engaged in developing minreal rsources there have been in operation cement, brick, and glass factories. Recently there has been completed a third glass factory.

In Vladivostok there is in operation a large government owned well equipped mechanical and ship building plant. Lack of capital interferes with the development of its operation on a large scale. Another large government machine plant is in Khabarovsk. There are about 20 foundries and pig iron plants which are mostly engagend in machine repairs, but so far they did not even satisfy the local demands. On the Bay of St. Olga a large iron producing plant could be built, as there are very large deposits of iron ore there. From there it would be possible to supply in addition to the Petrovsk plant located in the Pribaikal Province not only the entire Far Eastern Republic, but also Western Siberia and part of European Russia.

There are three industrial centers in the Martiime and Priamur Provinces, namely, Vladivostok, Khabarovsk and Nikolsk-Ussuriisk.

The total turnover of the factories and shops of Vladivostok during the year 1915 was 12,000,000 gold rubles. The following table gives information about the larger factories and shops in the Maritime Province.

Some of the distilleries in the Republic are being worked again by the Goverment, the alcohol being used for technical and medical purposes.The income from this industry to the Government in the provinces except Maritime amounts to one million gold rubles, but much more is expected in the near future.

Industry	*No. of Plants*	*No. of Workers*	*Value of Production, or Capacity*
Saw Mills*	44	700	up to 2,000,000 logs
Paper Mills	1	210	3,600 poods of cardboard
Furniture	1	900	
Box	1	15	38,000 cu. ft. of wood
Veneer	2	320	2,000,000 cu. ft. of wood
Ship Building ...	3	1,025	
Pig iron & machine	20	404	up to 2,200,000 gold rubles
Glass**	2	455	30,000 poods window glass
			310,000 bottles
			1,100 poods silicate
Brick	6		
Soap	4	580	13,000 poods soap
			1,100,000 pieces toilet soap
Tanneries***	3	200	40,000 hides
Steam Flour Mills****	18		3,500,000 poods grain
Oil Refineries	8	650	15,600 poods vegetable oil
Spirit Distilleries..	3		not working at present
Breweries	13		not working at present
Canneries***** ..	1	60	37,656 cans of crabs
Tobacco and			
Cigarettes	11	300	4,000 poods of tobacco
			75,000,000 cigarettes
			300,000,000 paper cases for cigarettes
Electric Power			
Plants	11		5,067,640 kilowatt

Remarks:

*At the present time the number of saw mills has considerably decreased. Only 28 or 30 are in operation.

**Recently a third plant was put in operation.

***Recently a fourth plant began operation with a producing capacity of 2,500 hides monthly.

****A new large steam flour mill is being built.

*****The second canning plant is closed at the present time.

CHAPTER X.

EXPORTS AND IMPORTS.

There is no exact and exhaustive data in regard to the exports and imports in the territory at the present time occupied by the Far Eastern Republic, from which a definite idea can be had regarding the movement of merchandise and of the character of the commercial life of the country. The figures for the years 1913-1917, i. e., for the pre-revolutionary period, are general figures of imports to Asiatic Russia as a whole, i. e., into the present territory of the Far Eastern Republic and also for further transit to Siberia and Russia. The same thing is true in regard to exports. It does not seem possible to exactly determine the proportion of this trade which can be applied to the territory at present occupied by the Far Eastern Republic. These figures are characteristic and important for determining the quantity of merchandise which in general was received and shipped through the Russian Far East (and which may be received and shipped in the future), whether the merchandise was goods in transit which gives an income to the customs and the railroads, or whether it was goods intended for the Far East. The figures for 1914-1917 (in 1914 only partially), include mostly the merchandise which was shipped to Russia through Vladivostok in connection with the war and the closing of the southern European Russian frontier. These figures are interesting as they indicate the significance of Vladivostok as a port not only for the Far Eastern Republic, but also for Russia, and as an indication of the carrying capacity of the railroads of the Far Eastern Republic. The figures for 1919, 1920, 1921, the years that the Russian Far East began to live an independent life, would be extremely important and decisive if not for the fact that these years could not be, under any circumstances, considered as normal; in 1919 and the beginning of 1920 mili-

tary intervention of the allies and civil war were still taking place; during the rest of the time there took place the development of the destructive Japanese aggression which absolutely violated the normal development of life in the country and which compelled the productive Russian population to abandon peaceful labors and to shoulder rifles for the purpose of self-defense. Thus far, in 1922, the situation still remains abnormal in view of the fact that the entire important province, the Maritime, has been cut off from the Far Eastern Republic, by the Japanese, and part of the mainland on the lower part of the Amur, and the Island of Sakhalin, were seized by the Japanese. These factors have to be taken into consideration when the figures that are presented below are considered. If these figures do not give an exact picture of the commercial life of the country, they still give a more or less definite approximate idea of it, and such which permits the drawing of certain conclusions which may be of practical significance.

Merchandise was imported into the Far East and through it to Siberia and European Russia by several routes.

1. Through Vladivostok, and then through the Ussuri, Chinese Eastern, and Siberian Railroads.

2. Through Nikolaevsk on the Amur and then along the Amur River to the city or Sretensk from where it was shipped by railroad.

3. Through Dairen to Harbin-Manchuria, i. e., Dairen, then the South Manchurian Railroad, Chinese Eastern Railroad, and Siberian Railroad.

4. Through Harbin on the Sungari River to the Amur River, and further.

5. Through Manchuria from Station Pogranichnaya, to the Maritime Province (primarily grain products).

The same routs were used in exporting. The principal routs were Vladivostok and Station Manchuria. Upon examination of the figures given below, the following is evident: according to the information of the customs through Vladivostok and Nikolaevsk during the year 1917, there was brought in from abroad merchandise to the value of 82,000,000 rubles (all the ruble figures are in gold). The importation of merchandise through Nikolaevsk in 1914 amounted to 85,000 tons. The im-

portation of merchandise through Vladivostok in 1913 amounted to 420,000 tons; during 1915, about 400,000 tons (value 81,400,000 rubles) were brought in. The imports through Sungari to the Amur during 1909 was 101,601 tons. During 1910 it was 159,317 tons (this freight was mostly intended for the Far East, the greater part of it being Manchurian grain and flour; in this freight was also included transit freight of 8,000 tons of Manchurian beans for the port of Nikolaevsk.)

The following are the principal figures of imports for the years 1913, 1914, 1916, 1917, 1918, and 1920.

Imports from	1913	1914	1916	1917	1918	1919	1920
			in gold rubles, in round figures				
Japan	4,271,413	10,413,147	117,299,000	74,234,000	40,034,000	70,034,000	22,881,000
China	52,120,000	38,411,000	94,389,000	92,660,000	20,006,000	57,901,000	34,455,000
America	2,202,838	12,200,000	321,404,000	218,520,000	16,866,000	104,353,000	26,000,000
Total	58,594,251	61,024,147	533,092,000	385,414,000	76,906,000	233,212,000	83,236,000

The figures for 1913 and 1914 may be considered as practically normal. The large figures of imports for 1916 and 1917 are explained by the war conditions as everything was imported by orders of the War Department. 1918 and particularly 1919, and the beginning of 1920, as already mentioned, are the years of military intervention and the domination throughout Siberia of Admiral Kolchak. Thus imports were exclusively for the Far East, and Siberia, which was separated from European Russia by fighting fronts. Japan and America brought in their freight primarily through Vladivostok, China through Vladivostok and Nikolaevsk and Station Manchuria, (which is the land frontier).

The situation in regard to exports prior to 1913 may be seen from the following figures:

EXPORTS TO CHINA AND THE FAR EAST AND THE REST OF ASIATIC AND EUROPEAN RUSSIA THROUGH THE FAR EAST

Route	1909	1910	1911	1912
			in rubles	
Through Station Manchuria	8,000,000	11,600,000	12,200,000	15,500,000
Through Amur Ports (Nikolaevsk and Blagveshchensk-Sakhalyan)	200,000	400,000	600,000	600,000
Through Station Pogranichnaya	11,500,000	7,900,000	9,400,000	11,400,000
Total	19,700,000	19,900,000	22,200,000	27,500,000

To America in 1912 there was exported merchandise to the value of over 2,000,000 rubles, and to Japan somewhat less.

Altogether through Vladivostok to other countries there was exported during the year 1914 (not counting transit goods), about 30,000 tons; through Nikolaevsk over 38,000 tons. During 1915 through Vladivostok there was exported over 46,000 tons, value of which was 34,600,000 rubles. When more detailed figures for years 1913, 1914, 1916, 1917, 1918, 1919, and 1920 are considered, the following becomes evident:

Exports to	1913	1914	1916	1917	1918	1919	1920
			in gold rubles, in round figures				
Japan	750,486	1,025,695	1,774,000	3,775,000	4,367,000	4,925,000	3,832,000
China	30,000,000	31,000,000	44,102,000	21,022,000	8,735,000	62,691,000	22,908,000
America	2,356,527	2,200,000	8,000,000	4,000,000	8,000,000	14,000,000	22,000,000
Total	33,107,013	34,225,695	53,876,000	28,797,000	21,102,000	81,616,000	48,740,000

Note: The figures regarding China are taken from the Chinese customs reports which are given in Haikwan Taels. The taels in this table were converted into yens (and rubles) at the average rate of exchange of the respective years. The rate of exchnage during 1916 in yens was 1.54 yen; 1917—1.98 yenffi 1918—1.37 yen; 1919—2.72 yen; 1920—2.38 yen. The yen then is taken to be equal to a gold ruble.

Thus the commercial turnover with Russia through the Far East was as follows:

Year	Imports	Exports	Turnover
1913	58,894,251	33,107,013	91,701,264
1914	61,024,147	34,225,695	95,249,842
1916	533,092,000	53,876,000	586,968,000
1917	385,414,000	28,797,000	414,211,000
1918	76,906,000	21,102,000	98,008,000
1919	233,212,000	81,616,000	314,828,000
1920	63,358,000	60,640,000	123,998,000

If the articles of export and import are to be considered, the following is the situation: In 1914 and 1915 there were exported from Vladivostok according to the figures of the Vladivostok Chamber of Commerce the following:

Article	1914 short tons	1915
Wheat	—	9,342
Oil Cakes	4,856	8,188
Veneer	1,849	6,016
Lumber	4,799	—
Aspenwood	3,568	5,323
Herring fresh	—	3,051

Article	1914	short tons	1915
Seaweed	695		1,417
Oats	72		1,321
Bran	1,548		1,213
Sheep Wool	—		1,114
Grass Seeds	—		852
Fish	1,791		848
Butter	985		641
Beans	288		594
Fertilizers	1,100		587
Camel Hair	—		448
Herring preserved	2,707		410
Zinc	52		229
Others	5,617		4,747
Total	29,927		46,341

The imports during 1915 through Vladivostok besides tea, which was imported on the average of 120,000,000 Russian ibs., and partially through Nikolaevsk, were as follows:

Article	short tons 1915
Acids	2,763
Aluminum	513
Ammonia	187
Antimony	4,772
Asphalt	490
Binder Twine	9,927
Boilers	846
Building Material	3,514
Biscuits	1,040
Cattle	1,881
Cement	4,789
Chemicals	441
Coal	84,006
Copper	25,342
Copper manufactures	256
Copra	10,867
Cotton, raw	58,747
Cotton, prepared for spinning	410
Drugs	436
Dyes	423
Dye extracts	207

Article	short tons 1915
Explosives	482
Foodstuffs	5,845
Fruits	9,704
Grain	430
Grinders	835
Gums	493
Iron	2,126
Iron, crude	1,501
Iron manufactures	974
Iron ships	297
Jute	301
Jute Bags	5,542
Lead	14,917
Leather	563
Lumber	423
Machinery	7,888
Manganese Chlorate	315
Miscellaneous	24,665
Nuts	4,797
Oils	200
Paper	205
Pepper	182
Polishes	976
Plants	1,604
Potatoes	646
Rice	19,791
Rosin	947
Rubber	3,397
Salt	28,276
Soda	772
Sodium	2,101
Spices	1,611
Steel	412
Steel manufactures	408
Sulphuric Acid	187
Sulphur, refined	743
Tallow	3,186
Tanning Materials	9,435

Article	short tons 1915
Tin	3,760
Tin Plates	3,058
Tinned Goods	311
Turpentine	446
Vegetables	7,020
Vegetable Oils	1,156
Wax	205
Wire Manufactures	853
Wooden Goods	754
Zinc	10,318
Total	396,915

The figures regarding the exports and imports by countries are somewhat more definite, and indicate the quantity and character of the trade, of a given country (China, Japan and America), with Russia through the Far East.

TRADE WITH JAPAN.

During the years 1918 and 1919 the following merchandise was imported from Japan (in 1918 and 1919 merchandise was mostly for the Far East especially during 1918. During 1919 some of the merchandise was intended for a part of Siberia where foreign troops had penetrated.)

Article	1918	1919
	in yen (or gold rubles)	
Rice	22,000	165,000
Refined Sugar	190,000	45,000
Coal	468,000	2,869,000
Sulphur	—	2,000
Cotton Yarns	265,000	70,000
Leather Manufacturers	3,603,000	3,655,000
Cotton Fabrics	17,528,000	18,878,000
Woolen Fabrics	2,085,000	4,146,000
Knitted Undershirts & Drawers	206,000	4,277,000
Other Knitted Goods	529,000	845,000
Paper	914,000	3,304,000
All Other (mostly supplies for the military dept.)	14,222,000	32,702,000
Total	40,034,000	70,958,000

If these totals are compared with the totals of normal years such as 1913, and partially 1914 (the large imports due to the war began only in 1915) it will become clear that these figures even without considering the war munitions (40,034,000—14,222,000=25,810,000 for 1918; and, 70,958,000—32,702,000 =38,256,000 for 1919) are abnormal. During 1913 the imports amounted to 4,271,413 yen, in 1914 to 10,413,147 yen.

The following is a table of Japan's exports to Vladivostok by years:

Year	Amount in Yen (or Gold Rubles)
1913	4,271,413
1914	10,413,147
1915	78,299,178
1916	177,299,478
1917	74,234,145
1918	40,034,435
1919	70,958,261
1920	22,880,772

The figures of Japanese trade during the first four months of 1921 show the imports to the Russian Far East of only 2,750,-000 yen, which for the full year would be about 10,000,000 yen. These imports, considering the concentration of Japanese troops in the Maritime Province and Sakhalin, and their withdrawal, together with their merchants, from the Zabaikal and the Amur region, were exclusively for the Far East, and primarily for the Maritime region. Beyond the Far Eastern Republic, Japanese merchandise is not sold. A part of this merchandise was intended for the Japanese army. During the first nine months of 1921 the Japanese brought in through Vladivostok the following:

Article	Quantity in long tons
Agricultural Implements	194
Breadstuffs and grain	2,433
Cement	619
Chemicals	82
Coal	4,802
Cotton and manufactures of	494
Fiber	297

Article	Quantity in long tons
Fruits and nuts	1,653
Iron and Steel	1,394
Oil, mineral and vegetable	299
Paints and varnishes	68
Poultry and eggs	35
Salt	342
Sugar	1,596
Vegetable Products	2,298
Railway Material	1,646
Total	18,262

The Japanese imported from Siberia through the Russian Far East during the years 1913-1920 inclusive, as follows:

Year	Value in Yen
1913	750,486
1914	1,025,695
1915	3,564,492
1916	1,774,216
1917	3,775,281
1918	4,366,624
1919	4,924,980
1920	3,831,648

During the first nine months of 1921 the Japanese exported through Vladivostok merchandise valued at 4,352,495 rubles. It consisted of the following items:

Article	Quantity, in long tons
Chemicals	1,919
Fish and Fish Products	1,864
Flax	835
Flax Seed	4,821
Iron and Steel	9,204
Rubber Goods	1,181
Silver Ore	194
Vegetable Products	2,879
Wood	13,830
Total	36,727

It must be noted that during the years of intervention the Japanese paid least of all attention to raw materials. They tried to export primarily war munitions, and in general war supplies which they have bought for almost nothing, taking advantage of the abnormal conditions created by themselves. The only product exported by the Japanese in large quantities is fish, which was purchased from the population of Nikolaevsk on the Amur or which was caught by the Japanese themselves along the Okhotsk and Kamchatka shores, especially the Kamchatka. The exports of fish from the Russian Far East were as follows:

Year	Quantity in tons
1912	98,355
1913	129,476
1914	92,400
1915	54,267
1916	61,667
1918	78,683
1919	42,117

Since 1915 and up to 1917 there were exported from Nikolaevsk to Russia instead of Japan from 30,000 to 35,000 tons annually. Most of the fish shown in this table prior to 1915 and a considerable part after 1915 was exported to Japan.

The figures in regard to Japan are very interesting. These figures show that the exports from the Russian Far East to Japan do not exceed five million rubles. The only product in which Japan is interested is fish. In regard to the imports into Siberia in normal years, the figures are equally eloquent. They are from 5,000,000 to 10,000,000 yen, which is a very insignificant part of the total Japanese exports. Thus the Japanese cannot explain their outrageous aggressive policy by commercial interests. When they speak of the danger threatening the interests of their merchants they are saying a deliberate falsehood, as their commercial interests in the Russian Far East are insignificant. The presence of Japanese troops only hurts the interests of Japanese merchants. The whole issue, is, of course, an effort by the Japanese to seize undeveloped colossal natural resources, and, important in a military strategic sense, the territory of Sakhalin and the lower part of the Amur.

The number of ships which sailed to Japan from Siberia and vice-versa during 1918 and 1919 are as follows:

Year	Entered		Cleared	
	No. Ships	Tonnage	No. Ships	Tonnage
1918	427	521,000	421	520,000
1919	238	293,000	240	295,000

TRADE WITH CHINA

The commercial turnover with China is considerably greater than with Japan, and indicates the importance of China in Russian trade, for the Russian Far East as well as for the Asiatic and even European Russia (especially exports of tea). China exported to the Russian Far East, and through it to Russia, during 1913, merchandise to the value of 52,120,000 rubles; during 1914—38,411,000 rubles. During the period of 1916 to 1920 China exported to the Russian Far East and through its ports and frontiers merchandise of the following value:

Through	1916	1917	1918	1919	1920
		(*in taels*)			
Russian Pacific Ports	37,056,545	28,748,557	11,037,662	12,671,335	7,062,125
Russian Amur Ports	3,790,230	7,085,862	1,593,227	3,099,263	3,155,238
By Land Frontier (Mainly Manchuria Station)	20,444,813	13,438,274	1,972,357	5,516,517	4,259,420
Total	61,291,588	49,272,691	14,603,246	21,287,115	14,476,783

This is on the average of 32,000,000 taels, and if the average rate of exchange of the tael is taken for the five years at 2.15 yen, then it was over 66,000,000 yen, which is about the same amount in gold rubles. China proper exported primarily tea, grain products (for the Russian Far East), cattle, wool, hides. Mongolia exported to Russia: cattle, hides, skins, furs, wool, and other animal raw products. Imports from China proper and Mongolia always exceeded the exports to these countries.

During 1913 China imported from the Russian Far East mer-

chandise to the value of 30,000,000 gold rubles, and in 1914—31,000,000 gold rubles.

For the period 1916 to 1920 merchandise exported from Siberia to China amounted to the following values:

Through	1916	1917	1918	1919	1920
Russian Pacific Ports	18,588,221	8,094,348	4,676,830	12,228,251	5,732,681
Russian Amur Ports	314,505	154,193	265,008	95,281	380,577
Russian Land Frontier (mainly Manchuria Sta)	6,735,186	2,933,515	1,434,106	1,724,603	3,511,835
Total	25,637,912	11,182,056	6,275,944	14,048,135	9,625,093

This is an average of 13,000,000 taels, or, at the average rate of exchange for five years, 2.15 yen per tael, 28,000,000 yen, or about the same amount in gold rubles (these figures would be less if the Far Eastern Republic alone was to be considered).

China imported from Russia dry goods, cigarettes, tobacco, ready made clothing, arms, machines, railroad materials, kerosene, alcohol, wines, vodka, footwear, chinaware, glassware, sugar, metals and their products, rubber goods, notions, electrical supplies, stationery and hardware. Mongolia imported dry goods, metal products, etc. (primarily through the highway Peking-Kalgan-Kiakhta).

These items of imports, because of the difficulties experienced by Russia, will, in the next few years, not be shipped to China, and the proportion of exports from China to Russia as compared with the exports from Russia to China will be even greater.

In regard to the Far Eastern Republic, the trade relations with China are interwoven. A considerable part of the trade of the Republic is in Chinese hands. Manchuria furnishes the Far Eastern Republic the grain products and fodder in which the Republic experiences a shortage. Mongolia furnishes the necessary cattle. The Republic exports to China furs, lumber and fish.

During the first nine months of 1921 there was exported to China through Vladivostok merchandise to the value of 2,148,-726 gold rubles, and through Stations Manchuria and Blagoveshchensk-Sakhalyan a considerably greater amount. For the

same period of 1921 the Far Eastern Republic imported from China through Station Manchuria only, merchandise to the value of 6,383,188 gold rubles, and, judging by the increased imports during 1922, the imports from China will be at least double.

The merchandise exported from Vladivostok to China during the first nine months of 1921, the value of which was 2,148,726 rubles consisted of the following items:

Articles	Quantity—Long tons
Chemicals	2,812
Fish and Fish Products	2,125
Flax Seed	23
Iron and Steel	4,089
Rubber Goods	818
Vegetable Products	3
Wood	1,662
Wool	100

Imports from China to Vladivostok for the same period consisted of the following items:

Article	Quantity in long tons
Agricultural Implements	1
Breadstuffs and Grain	228
Cement	146
Chemicals	79
Coal	205
Cotton and Manufactures of	170
Fibre	179
Fruits and Nuts	1,089
Iron and Steel	1,193
Meats and Dairy Products	1,008
Oil, Mineral and Vegetable	400
Paints and Varnishes	7
Poultry and Eggs	787
Salt	4,469
Sugar	283
Vegetable Products	971

Merchandise imported by the Far Eastern Republic through Station Manchuria consisted primarily of flour and grain, gran-

ulated sugar, bean oil, tea, millet, dry goods, notions, food stuffs, light metals, tobacco and paper.

The Ussuri Railroad, and particularly Vladivostok and the Amur shipping, to a considerable degree depend on Manchurian transit freight, primarily beans, which are shipped through Vladivostok and Nikolaevsk, for the various foreign markets. Thus in 1914, through Vladivostok, there passed 387,341 tons of such freights (including 12,843 tons of hempseed, and 8,332 tons of lumber), and during 1915 508,964 tons. Through Nikolaevsk during 1913 there passed in transit 20,000 tons of beans, and figures for later years indicate that there is a probability of transporting by this route over 100,000 tons during each navigable season.

During 1920, 264 steamers with a tonnage of 117,636 tons arrived in China from the ports of the Russian Far East and from China in the ports of the Russian Far East there arrived 245 steamers with a tonnage of 107,678 tons.

TRADE WITH THE UNITED STATES OF AMERICA

The trade between the United States and the Russian Far East, and with Russia through the Russian Far East prior to the War did not attain a large size. The exports from the Russian Fas East to the United States in 1912 totalled $1,443,-577; in 1913, $2,356,257. The imports into the Russian Far East from the United States during the same years was $1,206, 828 and $1,101,419 respectively. With the beginning of the war the picture changes. The Russian Far East becomes the principal open entrance to Russia, and the United States begins to ship all sorts of merchandise on Russian orders. During the year 1914 the imports from the United States were only $6,000,000. In 1915 they attained the figure of $44,000,000, in 1916 $161,000,000, and in 1917 $109,000,000. Trade with Russia after she drops out of the war ceases almost entirely, and the imports from America through the Far East during 1918 amounted to only $8,000,000. During the latter half of 1918, armed intervention begins, which in 1919 results in Kolchak's rule, which was supported by interventionists. The imports from the United States during 1919 increase, and reach the figure of $52,000,000. In March of 1920 following the Cana-

dian, French and British, the American troops withdraw, and the imports for that year drop to $13,000,000. During 1921 imports from the United States to the Far East were only a little over $1,000,000.

Exports from the Russian Far East to the United States from 1914 to 1921 were as follows:

Year	Value, in dollars in round figures
1914	2,000,000
1915	1,000,000
1916	4,000,000
1917	2,000,000
1918	4,000,000
1919	7,000,000
1920	11,000,000
1921	1,000,000

The most active years in regard to exports from the Russian Far East were 1919 and 1920, when, evidently, Americans succeeded in organizing some kind of local trade connections. Beginning with April 1920 begins the formal existence of the Far Eastern Republic, and since that time figures for the imports and exports are given only for the territory of the Far Eastern Republic. In regard to importation of American goods, it is necessary to point out that the given figures do not give the total quantity of American merchandise used in the Far Eastern Republic. The use of American goods is much greater having, no doubt, entered the Republic through China, primarily through Harbin.

The following tables, numbers 1, 2, 3, 4 and 5, give a clear picture of the quantity and character of American exports and imports in regard to the Russian Far East for the years 1912, 1913, -916, 1917, 1918, 1919, 1920, and 1921.

Table No. 1.

Imports into the United States from the Russian Far East
Years 1912-1913

Articles	1912	1913
	in dollars	
Chemicals, drugs, dyes and medicine:		
Licorice Root	165,985	286,365
All other	24,021	30,439
Furs and fur skins, undressed	35,837	98,312
Hides and skins (except fur skins)	29,528	51,364
Manganese oxide and ore of	229,406	693,812
Wool, etc.		
Unmanufactured	686,088	854,524
Manufacturers of, carpets & carpeting	104,175	89,682
All other articles	168,537	252,029
Total Imports	1,443,577	2,356,527

Table No. 2

Exports from the United States to the Russian Far East
Years 1912-1913

Articles	1912	1913
	in dollars	
Domestic Exports:		
Agricultural implements, and parts of	695,506	550,871
Breadstuffs:		
Wheat flour	7,357	26,377
All other	4,374	6,076
Cars, carriages, other vehicles, & parts of	387	1,386
Chemicals, drugs, dyes and medicines	403	6,686
Clocks, and watches, and parts of	150	145
Cotton, manufacturers of	10,960	11,884
Fibers, vegetable and textile grasses, manufacturers of:		
Twine, binder	75,838	122,736
All other	5,195	1,167
Fruits and Nuts	57,941	31,192
Instruments, etc. for scientific purposes	95	32
Iron and steel, manufacturers of:		
Builders' hardware and tools	30,059	16,472

Articles	1912	1913
	in dollars	
Machinery, machines, and parts of...	134,076	66,335
All other manufactures of.....	46,957	42,128
Leather and tanned skins, and manufacturers of.....	1,578	6,304
Meat and dairy products:		
Beef, pickled and other cured.....	———	1,181
Milk, condensed.....	84,153	145,056
All other.....	1,474	14,987
Oils	276	2,287
Paper and manufactures of.....	1,280	628
Salt	261	39
Soap	34	107
Wood, and manufactures of.....	4,955	1,506
All other articles.....	41,331	43,344
Total Exports.....	1,206,828	1,101,419

Table No. 3.

Imports into the United States from Russia in Asia (Siberia) 1916-1918 (incl.)

Articles	1916	1917	1918
	IN	DOLLARS	
Carpets and Rugs....	63,000	240,000	———
Fur Dressed	150,000	188,000	548,000
Licorice Root	1,476,000	184,000	175,000
Platinum	———	—	2000,000
Sausage Casings	802,000	995,000	202,000
Seeds, Grass	334,000	138,000	52,000
Seeds, sugar beet.....	1,058,000	242,000	62,000
All other articles.....	252,000	177,000	936,000
Total.....	4,140,000	2,164,000	3,975,000

Table No. 4.

Imports into the United States from Russia in Asia
1920-1921

Articles	1920	1921
	IN DOLLARS	
Animals, Swine		200
Articles specially imported, (other than scientific apparatus)	200	
Articles ret'n'd (other than automobiles)	1,087,255	108,000
Art works, original paintings, etc.	912	—
Bristles:		
not sorted, bunched or prepared	12,457	2,247
sorted, bunched or prepared	25,401	20,000
Chemicals, drugs, dyes, medicines:		
Licorice Root	434,500	—
Nitrate of Soda	—	245,822
All other	—	35,123
Coal and Coke		
Coal-Bituminous	300	—
Coffee	26,400	46,483
Fibres and Textile Grasses, n. e. s.		
Unmanufactured		
Flax, hackled "dressed line"	12,357	—
Other	419,812	—
Woven fabrics, plain, of flax, hemp, or ramie, including shrirting cloth	1,791	—
Woven articles and mfrs of flax, n. e. s.	2,131	—
Fish:		
Cured and preserved	125	70
Cured and preserved	11,012	—
Fresh Fish, salmon	64	—
Furs and fur skins:		
Undressed	4,553,471	341,752
Dressed on skin	10,869	394
Dressed and manufactured	4,381	245
Hair:		
Horse	99,544	—
Other animal	12,439	—

Articles	1920	1921
	in dollars	
Hides and skins (except fur skins):		
Calfskins		
dry	159,231	—
Green or pickled	33,867	—
Cattle hides		
Dry	109,354	—
Green or pickled	173,400	—
Goatskins		
Dry	564,500	—
Green or pickled	5,026	—
Horse, colt & Ass Skins, dry	51,950	—
Sheepskins		
Dry	261,334	500
Green or pickled	56,720	—
All other	15,148	8,092
Household & personal effects, & wearing apparel in use, etc.	7,159	709
Ivory—animal, tusks in natural state	50,810	5,652
Leather, manufactures of	64	—
Mattings and mats for floors, of coco fiber, rattan, straw, etc.	2,737	—
Meat and Dairy Products		
Sausage casings	847	—
Minerals, Crude, etc., n. e. s.		
Manganese, oxide and ore of	346,100	—
Paints, Colors, Varnishes	—	6,218
Phonogarphs, graphaphones, etc.	351	—
Photographic goods:		
Motion pictures, films, positives, etc.	80	—
Platinum, unmanufactured	175,000	—
Plumbago or graphite	19,370	—
Precious Stones	4,872	—
Seeds:		
Flaxseed or linseed	82,890	42,821
Grass seeds	754,800	—
All other seeds	25,111	—

Articles	1920	1921
	in dollars	
Silk:		
Wearing Apparel	45	—
Spices	4,601	—
Wood, Manufactures of	7	395
Wool, unmanufactured:		
Clothing, wool	272,351	—
Combing wool	62,381	—
Carpet wool	678,495	2,034
Wool, manufactures of	—	—
Carpets and rugs, woven, whole	19,713	—
Other manufactures of	33	—
All other articles	1,428	7,879
Total	10,655,196	874,491

Table No. 5.

Exports from the United States to Russia in Asia 1916-1921 incl.

Article	1916	1917	1918	1919	1920	1921
			(IN DOLLARS)			
Abrasives	.....	.....	351	7,995	.....	.....
Agricultural implements						
Hay rakes and tedders	.....	.....	.....	9,244	.....	.....
Mowers and reapers	582,000	441,000	.....	524,854	.....	.....
Plows and cultivators	.....	.....	1,377	25,580	.....	.....
Binder twine	2,264,000	704,000	.....	.....	.....	.....
All other	.....	.....	.....	116,193	.....	.....
Parts of	.....	.....	.....	719,303	18	409
Asbestos, mfrs of	.....	.....	.....	35,485	.....	.....
Athletic and sporting goods	.....	.....	8,927	65,090	24,863	23,722
Brass	.....	.....	62	5,344	3,433	1,742
Breadstuffs	.....	.....	4,998	23,888	2,029,067	316,463
Cars, automobiles and other vehicles:						
Automobiles, commercial	3,806,000	623,000	18,200	41,482	18,491	.....
Automobile, passenger	1,441,000	419,000	11,734	52,145	124,235	.....
Cars, freight	7,994,000	1,264,000	.....	.....	.....	.....
Parts of passenger automobiles (except engines and tires)	.....	.....	198	194,613	18,265	4,233
Cars for steam railways	.....	.....	.....	1,333,367	.....	.....
All other vehicles and parts of	.....	.....	497,130	3,241,171	10,228	191
Celluloid and mfrs of	.....	.....	37	6,293	.....	.....
Chemicals, drugs, dyes, etc						
Coal-tar distillates	.....	.....	.....	5,815	.....	.....
Logwood extract	.....	.....	7,575	690	.....	.....
Medicinal and pharmaceutical prepar.	.....	.....	417	15,950	24,600	643
Soda, caustic	.....	.....	4	12,573	17,706	.....

Articles	(IN DOLLARS) 1916	1917	1918	1919	1920	1921
Soda, ash	.....	.....	6,082	.....	.....	.....
All other chemicals	.....	.....	3,781	135,549	53,684	1,231
Cocoa and chocolate, prepared, etc.	.....	.....	2,692	69,844	7,441	3,079
Confectionary	.....	.....	6,600	40,200	29,240	4,307
Cork, mfrs of	.....	.....	.....	16,401	2,537	460
Copper, refined, ingots	3,092,000	871,000	.....	.....	.....	.....
Cotton mfrs of	.....	.....	127,382	3,910,079	1,955,990	58,000
Cotton, unmfrd	12,820,000	1,939,000	.....	.....	.....	.....
Earthern, stone and chinaware	.....	.....	16	20,056	.....	.....
Electrical machinery and appliances: (except locomotives)	.....					
Dynamos or generators	.....	.....	5,975	22,773	.....	.....
Interior wiring supplies, including fixtures	.....	.....	5,317	2,210	958	167
Motors	.....	.....	16,299	25,622	.....	.....
Switches and accessories	.....	.....	11,040	535	.....	.....
Telegraph apparatus (including wireless)	.....	.....	.....	19,849	.....	.....
Telephones	.....	.....	15,012	4,222	.....	.....
All other	.....	.....	9,658	54,976	4,298	581
Explosives (cartridges, gunpowder, etc)	70,341,000	71,319,000	360,073	181,939	69,154	47,526
Fibers, vegetable, mfrs of twine and others	.....	.....	193	364,513	12,093	5,352
Fish, canned	.....	.....	16	7,674	2,279	5,934
Fruits	.....	.....	1,503	79,271	37,831	14,836
Glass and glassware	.....	.....	324	11,034	3,969	1,250
Hats and materials for	.....	.....	3	9,045	.....	.....
Hops	.....	.....	.....	16,474	3,427	1,262
Household and personal effects	.....	.....	162	34,838	.....	.....
India rubber, mfrs of	.....	.....	12,097	558,025	57,571	3,310
Ink	.....	.....	453	11,335	.....	.....
Instruments for scientific purposes	.....	.....	99	6,164	9,862	858
Iron and Steel:						
Bars and rods of steel	.....	.....	.....	210,568	16,209	4,534
Bolts, nuts, rivets, etc.	.....	.....	2,865	34,670	7,043	7,705
Car wheels and axles	.....	.....	8,550	663,316	94,320	.....
Cutlery	.....	.....	1,176	83,603	2,139	337
Enamel ware	.....	.....	808	61,625	.....	.....
Firearms	1,642,000	771,000	5,331,043	8,405,739	216,747	30,746
Hardware	.....	.....	1,197	77,900	14,104	7,374
Hoop, band and scroll	.....	.....	.....	10,274	5,917	95
Horseshoes	.....	.....	.....	153,580	.....	.....
Machinery (except locomotives)	.....	.....	74,580	4,947,320	124,933	120,094
Locomotives	1,920,000	5,364	1,024,960	3,416,893	.....	.....
Metal-working machinery	3,076,000	1,799,000	8,703	157,840	7,336	.....
Mining machinery	.....	.....	.....	146,906	22,861	92
Printing presses	.....	.....	10,500	95,600	2,087	.....
Pumps and pumping machinery	.....	.....	1,232	201,288	.....	.....
Refrigerating machinery	.....	.....	.....	38,500	.....	.....
Sewing machines	.....	.....	44	210,405	535	3,487
Textile machinery	.....	.....	.....	12,000	.....	.....
Typesetting machines	.....	.....	18,650	4,846	.....	.....
Typewriting machines	.....	.....	2,296	181,179	20,040	.....
Woodworking machines	.....	.....	.....	40,407	12,693	450
All other machinery and parts of	.....	.....	43,030	276,297	237,811	3,600
Nails, wood screws, needles	.....	.....	207	72,881	4,240	2,062

	(IN DOLLARS)					
Articles	1916	1917	1918	1919	1920	1921
Pipes and fittings	.....	.....	.....	88,316	2,681	439
Radiators and house-heating boilers	.....	.....	.....	12,099	1,200	.....
Railway track material	1,720,000	2,110,000	244,553	780,066	16,718	.....
Sheets and plates	.....	.....	.....	62,361	4,095	9,774
Tin plates, and mfrs of	339,000	119,000	169	11,327	15,335	337
Tools	.....	.....	26,013	269,152	25,334	12,973
Wire, barbed	6,344,000	416,000	.....	.....	.....	.....
Wire, other	614,000	286,000	5,531	15,767	.....	.....
All other mfrs, iron and steel	.....	.....	2,230	69,335	142,804	10,710
Lead	1,664,000	117,000	51,262	3,852	15,847	2,293
Leather and mfrs of:						
Sole leather	1,870,000	2,447,000	851	2,040,504	701,639	155
Shoes, men's	2,917,000	231,000	168,822	9,208,801	1,343,233	19,152
All other	.....	.....	17,985	798,762	65,803	7,398
Meat and dairy products	.....	.....	3,786	45,939	23,670	11,190
Motor Boats	.....	.....	.....	.....	.....	50,500
Oils (for 1920, 21 incl. paints)	.....	.....	72,491	637,771	1,145,817	10,849
Paper	.....	.....	14,112	218,536	274,947	2,893
Photographic goods (films and others)	.....	.....	31,114	67,484	16,920	514
Soap (toilet and other)	.....	.....	2,275	54,969	14,793	2,548
Sugar, refined	.....	.....	1,673	13,564	32,045	27,646
Surgical appliances (not including instruments)	.....	.....	.....	871,764	245,174	182
Tin, pigs, bars, etc.	.....	.....	.....	152,304	.....	.....
Tobacco, mfrs. of	.....	.....	54,149	249,598	98,319	43,096
Typewriter ribbons	.....	.....	7	21,772	3,423	.....
Vegetables, canned and others	.....	.....	532	53,015	31,789	49,469
Wood, and mfrs of	.....	.....	2,794	8,152	5,178	5,366
Wool, mfrs of	.....	.....	7,515	234,277	2,331,104	3,257
Wearing Apparel	2,614,000	400,000	23,526	3,370,194	1,108,233	30,400
All other articles	31,530,000	15,374,000	31,968	826,767	254,240	141,936
Total exports	160,702,000	109,260,000	8,433,069	52,176,440	13,280,886	1,113,313

Summary.

If the actual figures of imports and exports of the Far Eastern Republic are taken into consideration since the organization of the Republic in 1920, then the following situation becomes clear:

Country	1920 Imports from	Exports to
	in gold rubles	
Japan	22,881,000	3,831,000
China	34,455,000	22,908,000
America	26,000,000	22,000,000
Total....	83,236,000	48,740,000

As was indicated above, the year 1920 should not be considered in any degree a typical year for the movement of merchandise to the Far Eastern Republic, because during the first three months of that year American troops were still there (not counting the Japanese who are there even at the present time, August, 1922). Besides Kolchak was overthrown only at the beginning of 1920 and thus the year 1920 in regard to exports and imports was more or less connected with 1919, when the imports and exports included also part of the territory of Siberia which is not included in the Far Eastern Republic.

Imports into the Far Eastern Republic in 1921

Country imported from	Value, in rubles
China through Manchuria for 12 motnhs....	6,386,188
Japan for four months (through Vladivostok)	2,750,000
America for 12 months.....	2,000,000
Total.....	11,136,188

In the above table are not included figures for:

1. The amount of imports from China through Vladivostok and Blagoveshchensk.

2. Amount of imports from Japan through Vladivostok for the remaining eight months.

It may be considered that the proper amount of imports was from 22,000,000 to 25,000,000 gold rubles.

During the year 1921 the exports from the Far Eastern Republic were:

Country Exported To	Value, in rubles
China, through Vladivostok for first 9 months	2,148,726
Japan for first nine months.....	4,352,495
America for the entire year.....	2,000,000
European Russia	1,982,368
Other Countries	138,505
Total.....	10,622,094

This table is also incomplete, as the following figures are not available:

1. Exports to China through Vladivostok for the last three months of 1921.

2. Exports to China through Stations Manchuria and Blagoveshchensk.

3. Exports to Japan for the last three months of 1921.

On the basis of figures of exports to China and Japan for nine months through Vladivostok it may be estimated that the exports for the year to China through Vladivostok were about 3,000,000 rubles; to Japan about 6,000,000 rubles. Exports to China through Stations Manchuria and Blagoveshchensk, taking the minimum figures, should be at least 3,000,000 rubles. Thus the approximate exports of the Far Eastern Republic during the year 1921 would be over 16,000,000 gold rubles.

The general information for 1922 so far indicates that the imports to the Far Eastern Republic through Station Manchuria only will be at least double that for 1921. The exports from the Far Eastern Republic during the year 1922 were also greater than those for 1921.

Analyzing the quantity and kind of goods exported and being exported from the Russian Far East (local products, not transit freight), it may be stated that the merchandise is primarily local raw materials, and that its quantity varies a great deal. The decisive factor for the last few years was purely political. Of the principal articles of export may be mentioned: timber (to China and Japan), furs (to America and China), casings (to America and other countries), flax (to America, China, Japan and England), wool, various sorts (to America, China and Japan), hides (to China, America, and Japan), bristle (to America, Japan and China), fish (to China and Japan). Besides these principal objects of exports, there are being exported to China and partially to Japan, some of the accumulated stock of such merchandise as: rubber goods, iron and steel, chemicals. Besides these, local vegetable products and silver ore were exported.

The imports to the Far Eastern Republic are primarily: grain products from China and breadstuffs from China and America; sugar from China, Japan, America; cloth from America and China; agricultural implements, cars (passenger and freight), electrical appliances, explosives, india rubber products, iron and steel (such as bolts, nuts, rivets, nails, car wheels, axles, cutlery, firearms), locomotives, various machinery, (me-

tal working, wood working, mining, pumping, sewing machines) railway track material, tools (all these mostly from America), chemicals (America, Japan), manufactures of cotton (America Japan), leather and leather products (America, Japan), oils-mineral and others (America, Japan), paper (America, Japan). The rapid development of trade and partially of industry on the territory of the Far Eastern Republic, and the growth of cultural needs of the population indicate the gradual growth of the size of the market of the Russian Far East which is now existing as the Far Eastern Republic. The development of the natural resources, which is slowly and gradually progressing, will still more increase the demands of the market. The development of the forest and mining industries will require a tremendous quantity of machinery and materials. Also the improvement in transportation on land as well as on water, and the construction of electrical tramways, the building of sewers, telegraph and telephone communications, will also aid in the increase of the demands of the market of the Far Eastern Republic. In regard to the conditions of the export market, i. e., in regard to raw materials at the present time and in the near future, the following approximate figures may be given:

The following items can be exported from the territory of the Far Eastern Republic:

Fish—from 3,000,000 to 5,000,000 rubles in the immediate future (after the liberation of the Russian territory from Japanese troops, the amount may again increase to former proportions 25,000,000 to 35,000,000).

Sea weeds, sea cabbage, oysters, crabs — 200,000 to 500,000 rubles (and perhaps more).

Timber (besides aspen logs)—3,000,000 gold rubles (exports of timber will be increased to tens of millions of rubles when the large virgin forests begin to be exploited).

Aspen logs—1,000,000 to 2,000,000 rubles (may be higher).

Furs—from 4,000,000 to 7,000,000 rubles (the average figure of 2,000,000 to 3,500,000 pieces of furs; the number used to be higher and with the carrying out of the proposed plan of furnishing hunters and trappers with all the necessary food supplies and equipment by the government of the Far

Eastern Republic, the quantity of furs may be increased considerably).

Casings—on the average 500,000 rubles (it had reached up to 1,000,000).

Flax—from 1,000,000 to 2,500,000 rubles (the amount could be increased to 10,000,000).

Wool—from 1,500,000 to 2,500,000 rubles.

Hides—500,000 rubles (prior to the war over 150,000 poods of hides were exported).

Bristle and hair—from 400,000 to 700,000 rubles (in some years up to 1,000,000 rubles and more(.

Honey and wax—150,000 to 200,000 rubles.

Not taking into consideration the possible exports of important minerals, especially after the development of the mining industry—the development of the tungsten, silver, lead, iron and other ores, coal mines, gold mines, and other mines, the total amounts of exports of raw materials which had been exported and which are being exported at the present time may equal from 16,000,000 to 20,000,000 gold rubles annually. Adding to this other objects which have been exported to China and Japan, to the amount of from 3,000,000 to 5,000,000 rubles, the total possible exports should be from 18,000,000 to 25,000,000 rubles. With the re-establishment of the fish industry, it may reach 40,000,000 to 50,000,000 gold rubles.

Taking into consideration the unlimited possibilities presented by the vast resources of the country, this amount is not large, especially when taking into consideration the necessity of large imports owing to the destruction wrought by the military foreign intervention. These imports undoubtedly will inevitably exceed the exports during the nearest few years.

CHAPTER XI.

THE PROSPECTS OF THE FAR EASTERN REPUBLIC.

The geographic position, its means of communication and position occupied by it as a transit point for Russia on the one hand, and for Manchuria and Mongolia on the other, promises a great future for the Republic in regard to transit freight. The railroad lines, the Ussuri and the Chita (besides the Amur Railroad which so far, because of its insufficient organization and its great length) instead of a deficit which is had from their operation, due to the presence of and behavior of the Japanese troops, which had isolated one part of the Republic from the other, will bring a considerable profit.

As had already been indicated above, up to 650,000 tons of Manchurian beans alone were shipped annually from the Chinese Eastern Railroad to the Ussuri Railroad. Fish, which at the present time is again being exported to Siberia and Russia, will have to be exported in large quantities, which will reach tens of thousands of tons. From the Far Eastern Republic will also pass the freight carried to Asiatic Russia and even European Russia, as well as the export freight from Siberia and European Russia.

The liberation of Nikolaevsk by the Japanese, and the complete opening of the river outlet to the sea will increase still more the transit capacities of the Republic. Manchuria, with her colossal grain wealth, lacks flour mills for the miling of the grain. The shipment of the grain to Vladivostok in the past had already aided the development of the flour industry, but greater development may be expected in the near future, in connection with favorable political and economic conditions which have been created in the Far Eastern Republic. Already at the present time there has been organized a new large Russian Chinese Flour Milling Company, which has built a large

flour mill in Vladivostok. The riches of the neighboring Mongolia in animal raw materials and the absence there of any manufacturing industry will give an opportunity to develop greatly and carry on on a large scale the tanning industry, soap making, candle making, and other affiliated industries.

If to this should be added the wealth of the Far Eastern Republic, itself, in animal products, as shown above, then the optimistic expectations in regard to these industries may be fully justified. Great opportunities are open to the lumber and paper industries. The 300,000,000 acres of almost virgin forests, consisting of pine, spruce, cedar, willow, larch, birch, oak, aspen, and others, make the future of the lumber industry secure. According to calculations of experts, the organized and complete utilization of forest resources of the Far Eastern Republic alone should give an income to the Government of the Far Eastern Republic sufficient for the covering of the Government expenses. Cultivation of flax which began so successfully in the Republic promises to become a large and important source of income for the population. Its importance will increases still more, after the peasants have been taught to utilize it, or when special factories are built for the utilization of the flax fibre which at the present time is being thrown away. The abundance of mineral riches necessary for the glass making industry make certain a permanent future for the glass industry. The same may be said in regard to the match manufacturing industry, and the cement industry. The fish canning industry also has a great future. In spite of all these opportunities creating large manufacturing industries, the center of gravity in the Far Eastern Republic will, however, for the next ten years lie in the basic industries, that is, in the development of raw materials. The principal place in this regard in the future as it was in the past, will belong to the gold industry. The resources of gold which are valued at 4,000,000,000 gold rubles, are sufficiently great to arouse energy on the part of the Government and private capital, Russian and foreign, for ite development on a large scale. The millions of tons of silver, lead, tin, iron, copper, coal, tungsten, bismuth, oil, and other minerals, will also draw the attention of those interested in the development of these minerals. The success of a large metallurgical

factory is assured not only by the market of the Far Eastern Republic which comes not less than 70,000 tons annually, but also by the colossal market in Northern Siberia and Russia. Thus, although it is evident from the figures presented above that under the present conditions the trade balance so far is not in favor of the Far Eastern Republic, nevertheless the prospects are such that this balance will soon become one favorable to the Far Eastern Republic. The energy of the Government is directed to the development of the area of cultivation of grain and intensification of agriculture in general, so that there would be no necessity to import the 80,000 to 120,000 tons of grain products which had to be imported up to the present time. Measures are also being taken to improve the equipment of the coal mines and to increase their production to an extent that would at least satisfy the requirements of the Republic. The improvement of these two industries would at once improve the trade balance of the Republic, not mentioning the fact that the increasing of oil making, candle making, soap making, fat melting, glass and tanning industries, would aid in creating a healthy commercial industrial life of the Republic.

Judging from the conditions of the cattle breeding industry and the possibilities of improving it, the Republic may also be provided with its own meat, in spite of the fact that at times the importation of meat to the Russian Far East amounted to 10,000 and 20,000 tons, and sometimes more. The city population (over 700,000 people) may easily be supplied with meat products of the Far Eastern Republic, as follows:

	Quantity	
Animals	Poods	Heads
Large cattle	1,000,000	120,000
Pigs	350,000	70,000
Sheep	400,000	200,000

a total of 1,750,000 poods, or about 30,000 tons, not counting the fish, game, dairy products which are consumed mostly by the rural population.

By providing the population with the essentials or food from its own resources, and the development of industries, the purchasing capacity of the population and, with it, the capacity

of the market, would increase considerably, and, consequently the imports and exports would also increase. The imports will especially increase in regard to manufactured products, machinery, automobiles, tractors, etc. The increase of production of course will require an increase in population, but this problem will undoubtedly be solved by special colonization of of the country by peasants and other classes of population from Russia. The productivity of the agricultural population in the Russian Far East according to the statistics gathered prior to the war, are estimated to be 400,000,000 rubles. The value of property of that population is over 700,000,000 rubles. The approximate value of the land utilized in agriculture (calculations made on the basis of net profits) is over 200,000,000 rubles; the value of the property of the cities, including the commercial and industrial enterprises roughly speaking according to the valuations of the Zemstvos are 500,000,000 rubles. The value of the Government property, according to approximate figures including the Government factories, shops, barracks, etc., are over 1,000,000,000 rubles.

Prior to the war the expenditure of the centralized and uneconomic administration of the Russian Far East which now comprises the Far Eastern Republic, were up to 40,000,000 rubles. These expenses on the part of the Czar's Government were almost never covered, although some years the deficit was not so great. The deficit is explained by the fact that at that time there was no income tax and no land tax. These taxes were introduced later, and undoubtedly when things become fully normal, and the whole territory will be under the authority of the Far Eastern Republic, the Government revenue will cover all the expenses, especially so when the heavy burden of keeping a big army will be disposed of, with the evacuation of the Japanese troops.

Thus these few facts and considerations are sufficient to show that a healthy foundation and bright prospects are confronting the Far Eastern Republic.

CHAPTER XII.

THE COOPERATIVES OF THE FAR EASTERN REPUBLIC.

While the cooperatives of various sorts have already played an important part in the economic life of Russia and Siberia, those of the Far East began to develop only a few years ago. For instance, in the Maritime Province, the first credit cooperative organization was organized in 1908, and the first consumers cooperative was organized in 1912. The World War and economic disorganization connected with it, the great inflation of prices and other causes compelled the population, rural as well as urban, to seek a solution in uniting their efforts and in collective organization of supply and credits

The largest of the unions of consumers cooperatives in the Maritime and Priamur Provinces—"The Union of Priamur Cooperatives"—began to function with a stock capital of 1800 rubles, and a loan of 300 rubles. The turn-over of the union during 1916 was 1,705,000 rubles, and its profits were 22,000 rubles. During 1917, in spite of the railroad disorganization, and a shortage of goods in the market, the union sold goods to the value of 10,193,321 rubles, of which the local market consumed merchandise to the value of 5,450,632 rubles, and to European Russia it shipped for other cooperatives merchandise to the value of 4,743,281 rubles up to January 1st, 1918.

In spite of the fact that the first credit cooperative was organized in the Maritime Province only in 1908, by the middle of 1913 there were 23 organizations with 6,449 members, and a capital of open credits of 553,724 rubles. On January 1st, 1915, there were already 67 credit unions serving a large district or rural population which contained 44,000 peasant holdings. The loans made during 1913 amounted to 241,000 rubles; during 1914, to 1,191,000 rubles. Deposits on January 1st, 1914,

were 199,000 rubles; January 1st, 1915—582,000 rubles. On January 1st, 1917, part of the cooperative associations joined the Priamur Credit Union which in 1919 already had united 53 societies, i. e., the greater part of the credit societies in the Maritime and Priamur Provinces. The same thing happened also in the Amur Province as well as the Zabaikal and Pribaikal Provinces, the difference being that in the two latter provinces the cooperative organizations developed earlier than in the other.

Up to 1921 there were the following number of cooperatives of the first stage, i. e., the local organizations (not combinations of cooperative organizations):

		Cooperatives of the First Stage			
Province	*Consumers*	*Credits*	*Producers*	*Selling*	*Mixed*
Amur	349	53	17	8	2
Maritime and Priamur	163	64	10	3	..
Zabaikal	320	80	..	11	..
Pribaikal	238	50	..	..	..
Former Sakhalin Province (now included in the Priamur Province)	15	5	38	..	20
Total	1,085	252	65	22	22

Thus up to 1921 there were already on the territory of the Far Eastern Republic 1,446 cooperatives of the first stage, which, in turn, united into various large units. In 1922, at a convention of cooperatives, there was considered the question of uniting the entire cooperative movement, but the gradual realization of this will require some time in view of the experiences of the recent years in which there was so much destruction of the economic life.

As is evident from the above table, the predominant type of cooperative organization in the Russian Far East is the consumers cooperative (75%). Then comes the credit cooperatives (17%), followed, respectively, by the producers, sellers, and mixed cooperatives, which are now only in an infant stage (their total perecentage is 8).

In the Amur Province, for instance, there are three small producers (agricultural) artels*. There are being organized

*Artel—small producers cooperative.

artels for hunting, and gold mining. In the lower part of the Amur there existed prior to the Japanese intervention in Nikolaevsk, up to 140 fishermen's and other working artels, of which at the present time there remain very few. In the Amur Province there are seven cooperative flour milling societies, of which only one is of more or less considerable size. There are 18 butter making artels in the Maritime Province and 11 in the Zabaikal Province. The production by Cooperatives in the Far Eastern Republic is very little devedoped. A large organization, such as the "Union of Priamur Cooperatives," the "Amur Cooperative Union," and the "Zabaikal Union," and others, have their own soap making plants, tanneries, flour mills, but all of them are of a small size. In view of the great fall in the value of the exchange of paper rubles in 1918 and 1919 (prior to the organization of the Far Eastern Republic, the cooperatives were compelled, in order to avoid complete loss of mediums of exchange, to receive in exchange for merchandise raw materials, which could be used as a medium of exchange for purchases abroad. The turnover of millions and the principle and business capital of the cooperatives in the Far East were considerably decreased in connection with intervention in general, and Japanese aggression in particular. Only after the organization of the Far Eastern Republic and the gradual improvement of the economic situation did the conditions of the cooperatives begin to improve. The introducing of gold as a medium of exchange and the refusal of the Government to print paper money has also considerably improved the conditions of the cooperatives. The most important work in the cooperative movement is being done by the "Centrosoyuz," which unites all the Russian consumers cooperatives, and the "Sincredsoyuz," the union of credit cooperatives. Both of these large organizations are performing mixed functions. They make purchases abroad, and sell, there, peasant products of Siberia. Simultaneously they are helping the local cooperatives in their efforts to develop the local industries, and have plans for participation in the development of the natural resources of the Far Eastern Republic.

According to the figures of the cooperative organizations they have altogether in the Far East 350,000 members; con-

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sidering on the average three persons per family, the cooperatives on the average represent over 1,000,000, i. e., about 50% of the entire population.

During the first half of 1922, when the Government of the Far Eastern Republic organized the "Bank of the Far Eastern Republic," which is supposed to aid in the development of the commercial and industrial life of the country, the cooperatives, together with private commercial and industrial capital, as represented by the Chambers of Commerce and Industry, took part in the organization of that bank, subscribing to a considerable part of the stock of the bank, and sending its reprseentatives to the Board of Directors of the Bank.

Summarizing, the brief and general information about the cooperative movement in the Far Eastern Republic, it may be stated that the cooperative movement is playing a considerable part in the economic life or the country, and it may be profesied with certainty that the part of the cooperative movement as a factor in the economic progress of the Far Eastern Republic, will increase from year to year.

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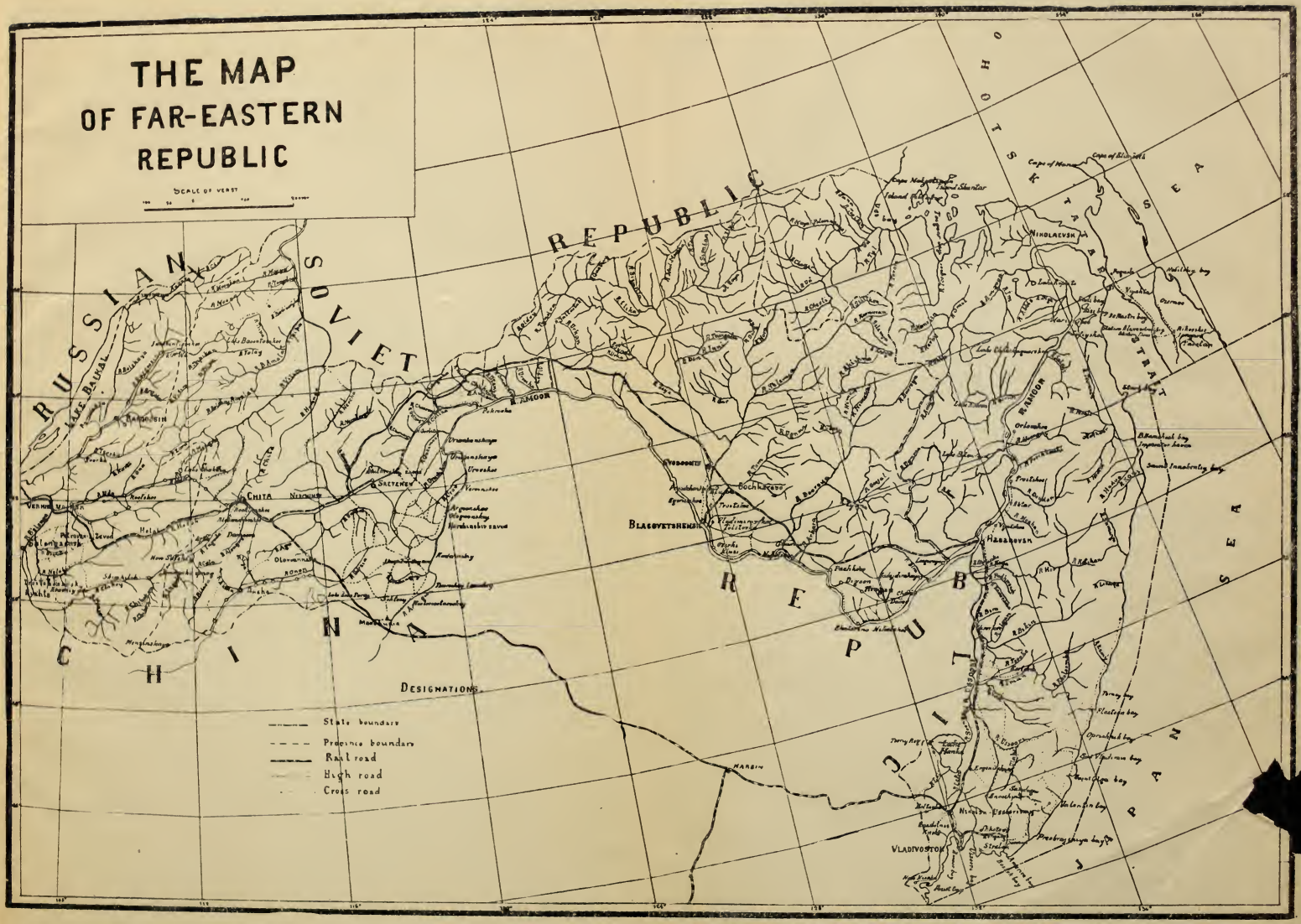
THE MAP
OF FAR-EASTERN
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SCALE OF VERST
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